WEST Search History

DATE: Thursday, July 03, 2003

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ		
L11	L8 and fecal	18	L11
L10	L8 and fecal adj5 reduc$	1	L10
L9	L8 and fecal adj5 shedding	1	L9
L8	L7 and (porin or ompa or ompc or ompd or ompf or phoe)	91	L8
L7	salmonella and (enterochelin or aerobactin or ferrichrome or lactoferrin)	303	L7
L6	l3 and outer membrane adj10 porin	8	L6
L5	l3 and siderophore adj10 porin	2	L5
L4	L3 and srp adj10 porin	2	L4
L3	fecal adj5 shedding	89	L3
L2	L1 and fecal adj5 shedding	2	L2
L1	srp and porin	14	L1

END OF SEARCH HISTORY

10/038504

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NEWS 4	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 5	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS 6	Aug 26	Sequence searching in REGISTRY enhanced
NEWS 7	Sep 03	JAPIO has been reloaded and enhanced
NEWS 8	Sep 16	Experimental properties added to the REGISTRY file
NEWS 9	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS 10	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS 11	Oct 24	BEILSTEIN adds new search fields
NEWS 12	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
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NEWS 14	Nov 25	More calculated properties added to REGISTRY
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NEWS 24	Feb 26	NTIS now allows simultaneous left and right truncation
NEWS 25	Feb 26	PCTFULL now contains images
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NEWS 29	Mar 24	Additional information for trade-named substances without structures available in REGISTRY
NEWS 30	Apr 11	Display formats in DGENE enhanced
NEWS 31	Apr 14	MEDLINE Reload
NEWS 32	Apr 17	Polymer searching in REGISTRY enhanced
NEWS 33	Jun 13	Indexing from 1947 to 1956 added to records in CA/CAPLUS
NEWS 34	Apr 21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS 35	Apr 28	RDISCLOSURE now available on STN
NEWS 36	May 05	Pharmacokinetic information and systematic chemical names added to PHAR
NEWS 37	May 15	MEDLINE file segment of TOXCENTER reloaded
NEWS 38	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS 39	May 16	CHEMREACT will be removed from STN
NEWS 40	May 19	Simultaneous left and right truncation added to WSCA
NEWS 41	May 19	RAPRA enhanced with new search field, simultaneous left and right truncation
NEWS 42	Jun 06	Simultaneous left and right truncation added to CBNB
NEWS 43	Jun 06	PASCAL enhanced with additional data
NEWS 44	Jun 20	2003 edition of the FSTA Thesaurus is now available

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 NEWS 45  Jun 25  HSDB has been reloaded

 NEWS EXPRESS  April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
               MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
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=> s salmonella and fecal (5a) shedding
L1          242 SALMONELLA AND FECAL (5A) SHEDDING
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=> s l1 and srp (5a) porin?
L2 0 L1 AND SRP (5A) PORIN?

=> s l1 and siderophore?
L3 2 L1 AND SIDEROPHORE?

=> d bib ab 1-2

L3 ANSWER 1 OF 2 WPIDS (C) 2003 THOMSON DERWENT
AN 2002-557722 [59] WPIDS
DNC C2002-158349
TI Composition for treating animal for high somatic cell count and reducing **fecal shedding** of microbe in intestinal tract of animal has two **siderophore** receptors and porins of gram negative microbe and lipopolysaccharide.
DC B04 C03 D16
IN EMERY, D A; KALLEVIG, G K; STRAUB, D E; ZAMMERT, D E
PA (EMER-I) EMERY D A; (KALL-I) KALLEVIG G K; (STRA-I) STRAUB D E; (ZAMM-I) ZAMMERT D E; (WILL-N) WILLMAR POULTRY CO INC
CYC 97
PI WO 2002053180 A2 20020711 (200259)* EN 83p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
US 2003036639 A1 20030220 (200316)
ADT WO 2002053180 A2 WO 2002-US188 20020103; US 2003036639 A1 Provisional US 2001-259504P 20010103, Provisional US 2001-262896P 20010119, US 2002-38504 20020103
PRAI US 2001-262896P 20010119; US 2001-259504P 20010103; US 2002-38504 20020103
AB WO 200253180 A UPAB: 20020916
NOVELTY - A composition (I) comprising at least two **siderophore** receptor polypeptides (SRPs) isolated from a gram negative microbe (II), at least two porins isolated from (II), and lipopolysaccharide (LPS) at a concentration not greater than about 10.0 endotoxin unit/ml (EU/ml), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) inducing (M1) the production of antibody in an animal, by administering a composition comprising at least four SRPs isolated from a gram positive microbe and a pharmaceutically acceptable carrier to the animal; and

(2) isolating (M2) outer membrane polypeptides, by providing (II), disrupting (II) in a buffer, solubilizing the disrupted (II), and isolating molecules of (II), where the isolated molecules comprise outer membrane polypeptides comprising at least two SRPs and at least two porins, and LPS at a concentration not greater than about 10.0 EU/ml.

ACTIVITY - Antiinflammatory; Antimicrobial.

MECHANISM OF ACTION - Vaccine.

The efficacy of a **Salmonella** dublin vaccine consisting of **Siderophore** receptor proteins (SRPs) and porins was carried out against a live virulent challenge in mice. Sixty female CF-1 mice weighing 16-22 g were equally distributed into 6 polycarbonate mouse cages designated as groups 1-6. The composition including **siderophore** receptor proteins and porins was prepared as a protein suspension (77.5 ml) emulsified to give a final dose of 125 mu g total protein in a 0.25 ml injectable volume at a 22.5% v/v adjuvant concentration. The mouse dose was adjusted to a field dose of 1 mg/2 ml. Potency of the vaccine was tested at four different concentrations: non-diluted (Group 1), 1:10 (Group 2), 1:100 (Group 3) and 1:1000 (Group 4) compared to two control groups, a non vaccinated challenged group (Group 5) and a non-vaccinated

challenge group (Group 6). Mice were vaccinated intraperitoneally and revaccinated 14 days after first vaccination with 0.25 cc. Fourteen days after the second vaccination, mice in groups 1-5 were intraperitoneally challenged with 1.7 multiply 108 colony forming units (CFU) of a virulent S.dublin isolate. Mortality was recorded daily for 2 weeks post-challenge. Ten (100%) of the non-vaccinated mice (Group 5) died within 14 days after challenge. In contrast, none of the mice died given the non-diluted vaccine of group 1. All dilutions of the test vaccine showed a high degree of protection as compared to the non-vaccinated/challenged mice of Group 5. None of the mice died in group 6 showing no horizontal transmission of the organism between the groups.

USE - (I) is useful for inducing the production of antibody in an animal e.g. avian, bovine, caprine, porcine or ovine, for treating an animal for a high somatic cell count, for reducing **fecal shedding** of a microbe in an animal's intestinal tract, for treating an animal for low milk production, and for treating mastitis and metritis in a milk producing animal (claimed). (I) is useful for treating a condition associated with a microbial infection.

Dwg.0/10

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2002:521529 CAPLUS
DN 137:77879
TI Immunizing compositions and methods of use
IN Zammert, Donavan E.; Kallevig, Gayla K.; Emery, Daryll A.; Straub, Darren E.
PA Willmar Poultry Company, Inc., USA
SO PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002053180	A2	20020711	WO 2002-US188	20020103
	WO 2002053180	A3	20030313		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003036639	A1	20030220	US 2002-38504	20020103
PRAI	US 2001-259504P	P	20010103		
	US 2001-262896P	P	20010119		

AB The present invention provides compns. including **siderophore** receptor polypeptides and porins from Gram-neg. microbes such as **Salmonella**, , and preferably lipopolysaccharide at a concn. of no greater than about 10.0 endotoxin units per mL. The present invention also provides methods of making and using such compns. and vaccines for vaccination of dairy cattle with no side effects for treatment of metritis or mastitis or to reduce **fecal shedding** of enteric bacteria.

=> d his

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FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS,

LIFESCI, CAPLUS' ENTERED AT 10:29:05 ON 03 JUL 2003
L1 242 S SALMONELLA AND FECAL (5A) SHEDDING
L2 0 S L1 AND SRP (5A) PORIN?
L3 2 S L1 AND SIDEROPHORE?

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L4 2 L1 AND PORIN?

=> d bib ab 1-2

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IN EMERY, D A; KALLEVIG, G K; STRAUB, D E; ZAMMERT, D E
PA (EMER-I) EMERY D A; (KALL-I) KALLEVIG G K; (STRA-I) STRAUB D E; (ZAMM-I) ZAMMERT D E; (WILL-N) WILLMAR POULTRY CO INC
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PI WO 2002053180 A2 20020711 (200259)* EN 83p
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AB WO 200253180 A UPAB: 20020916
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Dwg.0/10

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2002:521529 CAPLUS
DN 137:77879
TI Immunizing compositions and methods of use
IN Zammert, Donavan E.; Kallevig, Gayla K.; Emery, Daryll A.; Straub, Darren E.
PA Willmar Poultry Company, Inc., USA
SO PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002053180	A2	20020711	WO 2002-US188	20020103
	WO 2002053180	A3	20030313		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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PRAI	US 2001-259504P	P	20010103		
	US 2001-262896P	P	20010119		

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=> s l1 and outer membrane protein
L5 1 L1 AND OUTER MEMBRANE PROTEIN

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=> d bib ab

L5   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:521529  CAPLUS
DN   137:77879
TI   Immunizing compositions and methods of use
IN   Zammert, Donavan E.; Kallevig, Gayla K.; Emery, Daryll A.; Straub, Darren
     E.
PA   Willmar Poultry Company, Inc., USA
SO   PCT Int. Appl., 83 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.         KIND  DATE          APPLICATION NO.  DATE
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PI   WO 2002053180      A2    20020711      WO 2002-US188    20020103
     WO 2002053180      A3    20030313
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             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
             RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,
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             CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     US 2003036639      A1    20030220      US 2002-38504    20020103
PRAI US 2001-259504P    P     20010103
     US 2001-262896P    P     20010119
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     polypeptides and porins from Gram-neg. microbes such as Salmonella
     , , and preferably lipopolysaccharide at a concn. of no greater than about
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     of making and using such compns. and vaccines for vaccination of dairy
     cattle with no side effects for treatment of metritis or mastitis or to
     reduce fecal shedding of enteric bacteria.


=> s l1 and transmembrane
COMMAND INTERRUPTED
L6           0 L1 AND TRANSMEMBRANE
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=> d his

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     FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS,
     LIFESCI, CAPLUS' ENTERED AT 10:29:05 ON 03 JUL 2003
L1         242 S SALMONELLA AND FECAL (5A) SHEDDING
L2           0 S L1 AND SRP (5A) PORIN?
L3           2 S L1 AND SIDEROPHORE?
L4           2 S L1 AND PORIN?
L5           1 S L1 AND OUTER MEMBRANE PROTEIN
L6           0 S L1 AND TRANSMEMBRANE
L7           0 S L1 AND TRANSMEMBRANE
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CS (1) Vet. Med. Res. Inst., Coll. Vet. Med., Iowa State Univ., Ames, IA 50011 USA
SO Avian Diseases, (Jan.-March, 1998) Vol. 42, No. 1, pp. 6-13.
ISSN: 0005-2086.
DT Article
LA English
SL English; Spanish
AB Serial passage of wild-type **Salmonella** enteritidis (SE) in chicken heterophils resulted in decreased shedding of SE in chicken feces and reduced egg contamination. When serially heterophil-passaged strains (heterophil-adapted SE (HASE)) were given to groups of 12 or more laying hens in drinking water at a dose of 108 colony-forming units for 3 consecutive days, the inoculum persisted in the feces at low frequently for a few days only. Two challenge wild-type strains, given in similar manner, persisted in feces at high frequency for 25 days or longer. The persistence of challenge strains in hens previously exposed to HASE was considerably shorter and occurred less frequently than persistence and frequency in challenge control hens. HASE strains were not isolated from any of 494 eggs laid after exposure to HASE. The challenge strain was isolated from 15 of 208 eggs (7.2%) after challenge of control hens and never from 461 eggs laid after challenge of "**vaccinated**" hens. I concluded that HASE clones obtained by five or more cycles of heterophil phagocytosis were avirulent and immunogenic.

L10 ANSWER 3 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1997:216772 BIOSIS
DN PREV199799523276
TI Evaluation of an aroA mutant **Salmonella** typhimurium **vaccine** in chickens using modified semisolid Rappaport Vassiliadis medium to monitor faecal shedding.
AU Tan, S. (1); Glyes, C. L.; Wilkie, B. N.
CS (1) Animal Disease Res. Inst., P.O. Box 11300, Station H, 3851 Fallowfield Road, Nepan, ON K2H 8P9 Canada
SO Veterinary Microbiology, (1997) Vol. 54, No. 3-4, pp. 247-254.
ISSN: 0378-1135.
DT Article
LA English
AB In groups of chickens **vaccinated** orally or intramuscularly with a live aroA mutant **Salmonella** typhimurium **vaccine** strain and then experimentally inoculated with 10-8 CFU of wild type S. typhimurium or 10-9 CFU of S. enteritidis, faecal shedding of the **vaccine** and wild type strains was monitored by the buffered peptone water-modified semisolid Rappaport Vassiliadis medium method, which detected less than 10-2 CFU per gram of faeces. The **vaccine** strain was shed in the faeces for up to 26 days. **Vaccination** failed to reduce the faecal shedding of wild type S. typhimurium or S. enteritidis. The variation in the shedding patterns of chickens within each group was greater than between treatment groups.

L10 ANSWER 4 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1997:195776 BIOSIS
DN PREV199799494979
TI Studies of safety, immunogenicity and reactogenicity of a new live oral temperature sensitive (TS) **vaccine** 51-1 of **Salmonella** typhi.
AU Bellanti, J. A.; Zeligs, B.; Cotronei, C.; Mendez, J.; Sofat, N.
CS G.U. Sch. Med., Washington, DC USA
SO Abstracts of the Interscience Conference on Antimicrobial Agents and Chemotherapy, (1996) Vol. 36, No. 0, pp. 153.
Meeting Info.: 36th ICAAC (International Conference of Antimicrobial Agents and Chemotherapy) New Orleans, Louisiana, USA September 15-18, 1996
DT Conference; Abstract; Conference
LA English

L10 ANSWER 5 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1997:158535 BIOSIS
DN PREV199799457738
TI Safety and efficacy of an avirulent live **Salmonella** choleraesuis **vaccine** for protection of calves against S. dublin infection.
AU Fox, Bryce C.; Roof, Michael B.; Carter, David P.; Kesl, Lyle D.; Roth, James A. (1)
CS (1) Dep. Prev. Med., Coll. Vet. Med., Iowa State Univ., Ames, IA 50011 USA
SO American Journal of Veterinary Research, (1997) Vol. 58, No. 3, pp. 265-271.
ISSN: 0002-9645.
DT Article
LA English
AB Objective-To evaluate the safety and efficacy of avirulent live **Salmonella** choleraesuis strain 54 (SC54) as a **vaccine** to protect calves against salmonellosis caused by S. dublin. Animals-40 head of clinically normal 3 to 5-week-old male Holstein calves that were culture negative for **Salmonella** sp. Procedure-Calves were randomly assigned to 4 test groups of 10 calves each. Group 1 received 8.5 times 10-7 colony-forming units (CFU) of SC54 SC. Groups 2 and 3 received 1.13 times 10-9 CFU of SC54, SC and intranasally, respectively. Group 4 received saline solution as a **vaccine** control. All calves were challenge exposed orally with 1.74 times 10-9 CFU of virulent S. dublin 14 days after **vaccination**. Clinical signs and **Salmonella** shedding were monitored for 28 days after **vaccination**. Calves were necropsied, and organs were cultured for **Salmonella** sp. 14 days after challenge exposure. Results-Calves of groups 2 and 3 had slightly high rectal temperature after **vaccination**. **Salmonella** dublin challenge exposure resulted in mild clinical signs of salmonellosis. All **vaccinated** groups had significantly (P lt 0.05) lower rectal temperature, **fecal shedding** of S. dublin, and recovery of S. dublin from organs after necropsy. SC54 was not recovered from fecal or blood samples collected after **vaccination** or from injection site samples or organs collected at necropsy. Conclusions-SC54 given intranasally or SC to calves was safe and significantly (P lt 0.05) reduced clinical signs and bacterial shedding after oral challenge exposure with S. dublin. Clinical Relevance-SC54 has potential as an effective **vaccine** to aid in prevention of salmonellosis caused by S. dublin in calves.

L10 ANSWER 6 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1997:157379 BIOSIS
DN PREV199799456582
TI Host and viral factors affecting the decreased immunogenicity of Sabin type 3 **vaccine** after administration of trivalent oral polio **vaccine** to rural Mayan children.
AU Maldonado, Yvonne A. (1); Pena-Cruz, Victor; De La Luz Sanchez, Maria; Logan, Linda; Blandon, Stewart; Cantwell, Michael F.; Matsui, Suzanne M.; Millan-Velasco, Francisco; Valdespino, Jose Luis; Sepulveda, Jaime
CS (1) Dep. Pediatrics, Stanford Univ. Sch. Med., Stanford, CA 94305 USA
SO Journal of Infectious Diseases, (1997) Vol. 175, No. 3, pp. 545-553.
ISSN: 0022-1899.
DT Article
LA English
AB Factors affecting immunogenicity of the first 2 doses of oral poliovirus **vaccine** (OPV) among unimmunized Mayan infants were prospectively evaluated. The relative impact of multiple variables, including mass or routine **vaccination**, concurrent enteric bacterial (**salmonella**, shigella, and campylobacter) and viral (adenovirus 40/41, astrovirus, nonpolio enteroviruses, and rotavirus) infections, interference among Sabin **vaccine** viruses, and preexisting poliovirus antibodies were studied. Sera were available from 181 infants

SO Infection and Immunity, (1994) Vol. 62, No. 5, pp. 2027-2036.
ISSN: 0019-9567.
DT Article
LA English
AB The effects of experimental **Salmonella** infection on chicken lymphoid organs, immune responses, and **fecal shedding** of salmonellae were assessed following oral inoculation of 1-day-old chicks or intra-air-sac infection of 4-week-old chickens with virulent S. typhimurium wild-type chi-3761 or avirulent S. typhimurium DELTA-cya DELTA-crp **vaccine** strain chi-3985. Some 4-week-old chickens infected intra-air-sac with chi-3761 or chi-3985 were challenged with Bordetella avium to determine the effect of **Salmonella** infection on secondary infection by B. avium. S. typhimurium X3761 caused lymphocyte depletion, atrophy of lymphoid organs, and immunosuppression 2 days after infection in 1-day-old chicks and 4-week-old chickens. The observed lymphocyte depletion or atrophy of lymphoid organs was transient and dose dependent. Lymphocyte depletion and immunosuppression were associated with prolonged **fecal shedding** of S. typhimurium X3761. No lymphocyte depletion, immunosuppression, or prolonged **Salmonella** shedding was observed in groups of chickens infected orally or intra-air-sac with chi-3985. Infection of chickens with salmonellae before challenge with B. avium did not suppress the specific antibody response to B. avium. However, B. avium isolation was higher in visceral organs of chickens infected with chi-3761 and challenged with B. avium than in chickens infected with B. avium only. Infection of chickens with chi-3985 reduced B. avium colonization. We report a new factor in **Salmonella** pathogenesis and reveal a phenomenon which may play a critical role in the development of **Salmonella** carrier status in chickens. We also showed that 10-8 CFU of chi-3985, which is our established oral **vaccination** dose for chickens, did not cause immunosuppression or enhance the development of **Salmonella** carrier status in chickens.

L10 ANSWER 9 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1994:110174 BIOSIS
DN PREV199497123174
TI Evaluation of the efficacy of oil-emulsion bacterins for reducing **fecal shedding** of **Salmonella** enteritidis by laying hens.
AU Gast, Richard K.; Stone, Henry D.; Holt, Peter S.
CS U.S. Dep. Agric., Agric. Res. Serv., Southeast Poultry Res. Lab., 934 College Station Road, Athens, GA 30605 USA
SO Avian Diseases, (1993) Vol. 37, No. 4, pp. 1085-1091.
ISSN: 0005-2086.
DT Article
LA English
SL English; Spanish
AB Two replicate experiments were conducted to test the efficacy of two different **Salmonella** enteritidis oil-emulsion bacterins (an experimentally prepared acetone-killed **vaccine** and a commercially available **vaccine**) for protecting laying hens against intestinal colonization following oral exposure to S. enteritidis. Each **vaccine** was administered twice (4 weeks apart), and all hens were challenged with 10-8 cells of a nalidixic-acid-resistant S. enteritidis strain 2 weeks after the second **vaccination**. Fecal samples from **vaccinated** and unvaccinated control hens were cultured at three weekly intervals post-challenge to determine the incidence of intestinal colonization and the numbers of S. enteritidis shed into the environment. Both **vaccines** significantly reduced the incidence of intestinal colonization (P lt 0.05) and the mean number of S. enteritidis cells shed in the feces (P lt 0.01) at 1 week post-challenge. However, the degree of protection afforded by **vaccination** was only partial, as more than half of the

the second **vaccination**. **Vaccinated** pigs shed **Salmonella** spp. significantly less frequently than did nonvaccinated pigs. **Vaccinated** chickens challenge-inoculated with either S enteritidis or S typhimurium also shed **Salmonella** less frequently than the corresponding nonvaccinated control birds; however, the difference was not significant.

L10 ANSWER 12 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1987:380380 BIOSIS
DN BA84:66877
TI CONJUNCTIVAL AND INTRAMUSCULAR **VACCINATION** OF PIGS WITH A LIVE AVIRULENT STRAIN OF **SALMONELLA**-CHOLERAE-SUIS.
AU KRAMER T T; PARDON P; MARLY J; BERNARD S
CS DEP. VET. MICROBIOL. PREVENTIVE MED., IOWA STATE UNIV., AMES, IOWA 500011.
SO AM J VET RES, (1987) 48 (7), 1072-1076.
CODEN: AJVRAH. ISSN: 0002-9645.
FS BA; OLD
LA English
AB An avirulent mutant strain of **Salmonella** cholerae-suis was cloned for resistance to streptomycin and nalidixic acid. The mutant strain 33-13 also was used because of its avirulence and immunogenicity in mice. Weaned pigs were **vaccinated** with live strain 33-13; 5 pigs were **vaccinated** by conjunctivally adminstered 5.5 .times. 107 organisms (low dose), 5 were conjunctionally adminstered 5.5 .times. 109 organisms (high dose), and 5 pigs were administered 5.5 .times. 109 organisms (high dose) IM. Transient fever and transient **fecal shedding** of the **vaccine** strain developed in pigs **vaccinated** IM, but not in 2 groups of pigs **vaccinated** conjunctivally. After intratracheal administration of virulent strain 38-9, nonvaccinated control pigs (n = 9) developed persistent high fever, anorexia, bacteremia, diarrhea, and **fecal shedding** of strain 38-9, whereas **vaccinated** pigs remained afebrile and clinically normal. Nonvaccinated and uninfected sentinel pigs (n = 8) were kept in units of 2 pigs with each group of experimental pigs, and remained healthy throughout the experiment. Thirteen **vaccinated** and 7 nonvaccinated control pigs were killed 42 days after **vaccination**, and 2 **vaccinated**, 2 nonvaccinated, and 8 sentinel control pigs were killed 58 days after **vaccination**. Ten organs were evaluated by quantitative bacteriology on necropsy of all pigs for the presence of **vaccine** strain 33-13, and for virulent strain 38-9. Strain 33-13 was not found. Lung and liver, lesions were found in most of the nonvaccinated control pigs, with a high frequency of recovery of large numbers of strain 38-9 from the mesenteric lymph nodes, lungs, liver and ileum. Strain 38-9 was rarely isolated from the 10 organs evaluated in the 3 groups of **vaccinated** pigs. Sentinel pigs in contact with **vaccinated** and control pigs were uninfected when killed on day 58.

L10 ANSWER 13 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1979:193565 BIOSIS
DN BA67:73565
TI EFFECTS OF GALACTOSE EPIMERASE MUTANT OF **SALMONELLA**-TYPHIMURIUM ON EXPERIMENTAL SALMONELLOSIS IN CHICKENS.
AU PRITCHARD D G; NIVAS S C; YORK M D; POMEROY B S
CS CENT. VET. LAB., MINIST. AGRIC. FISH. FOOD., NEW HAW KT15 3NB, SURREY, ENGL., UK.
SO AVIAN DIS, (1978) 22 (4), 562-575.
CODEN: AVDIAI. ISSN: 0005-2086.
FS BA; OLD
LA English
AB Compared with unvaccinated challenged birds, day old chicks **vaccinated** orally with live S. typhimurium galactose epimerase mutant (G30D) and challenged orally after 14 days with a field strain of

S. typhimurium had statistically significant reductions in **fecal shedding** ($P < 0.01$), in **salmonella** carrier status at slaughter ($P < 0.05$), in **salmonella** in the broiler-house environment ($P < 0.005$) and in serological response in the 4th wk after challenge ($P < 0.005$). The **vaccine** did not elicit a serological response as measured by plate, microagglutination and microantiglobulin tests. The **vaccine** had a significant depression on live-wt gain which was not apparent after 6 wk. The **vaccine** did not significantly reduce live wt at 8 wk below that of unvaccinated control birds. The field strain produced an 8% reduction in live wt at 8 wk below that of controls. The potential role of **vaccines** in **Salmonella** control and economic losses due to salmonellosis are discussed.

L10 ANSWER 14 OF 19 MEDLINE
AN 94167725 MEDLINE
DN 94167725 PubMed ID: 8122236
TI [The control of bovine salmonellosis under field conditions using herd-specific **vaccines**].
Erfahrungen zur Bekampfung der Rindersalmonellose unter Praxisbedingungen mittels Anwendung stallspezifischer Vakzinen.
AU Weber A; Bernt C; Bauer K; Mayr A
CS Landesuntersuchungsamt fur das Gesundheitswesen Nordbayern, Nurnberg.
SO TIERARZTLICHE PRAXIS, (1993 Dec) 21 (6) 511-6.
Journal code: 7501042. ISSN: 0303-6286.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 199404
ED Entered STN: 19940412
Last Updated on STN: 19970203
Entered Medline: 19940407
AB Data were collected from 39 cattle herds in Northern Bavaria with confirmed outbreaks of salmonellosis and analysed regarding the use of herd-specific **Salmonella vaccines** in control of this infectious disease. The inactivated **vaccine** was applied intranasally three times at intervals of 1 week (each dose of 5 ml; concentration of antigen about 10(10) organisms/ml, inactivated by heat at 100 degrees C). Efficacy of **vaccine** was evaluated by comparing bacteriological examination of **fecal shedding** of Salmonellae before and after **vaccination**. The number of **Salmonella**-positive fecal samples was reduced within one week p. vacc. from 25% to less than 1% of all examined fecal samples. Two thirds (65.7%) of the herds were free of infection within 3 weeks p. vacc. Best results after **vaccination** were obtained when each animal, including the calves, was **vaccinated**. Further it could be determined that smaller farms with up to 70 cattle did better than larger farms, where often only a part of the herd was immunized (82.6% and 33.3%).

L10 ANSWER 15 OF 19 EMBASE
AN 2000382180 EMBASE
TI Transmission of rotavirus and other enteric pathogens in the home.
AU Dennehy P.H.
CS Dr. P.H. Dennehy, Div. of Pediatric Infect. Diseases, Rhode Island Hospital, 593 Eddy Street, Providence, RI 02903, United States
SO Pediatric Infectious Disease Journal, (2000) 19/10 SUPPL. (S103-S105).
Refs: 42
ISSN: 0891-3668 CODEN: PIDJEV
CY United States
DT Journal; General Review
FS 004 Microbiology

007 Pediatrics and Pediatric Surgery
037 Drug Literature Index
038 Adverse Reactions Titles
048 Gastroenterology
LA English
SL English
AB Rotavirus is the most common gastrointestinal pathogen present in day-care settings. Control and prevention of rotavirus infection are difficult because of the lack of a licensed **vaccine**, the absence of any effective treatment other than palliative measures and the presence of asymptomatic children **shedding** virus. Rotavirus is transmitted by **fecal**-oral contact and possibly by contaminated surfaces and hands and respiratory spread. Other gastrointestinal pathogens are also transmitted primarily by the fecal oral route, although contaminated surfaces, hands or food may also serve to transmit infection in some cases. Control and prevention measures for all enteric pathogens include isolating infected children from others, thoroughly cleaning and disinfecting environmental surfaces with effective agents and strictly following handwashing procedures before and after contact with infected persons and/or potentially contaminated surfaces.

L10 ANSWER 16 OF 19 WPIDS (C) 2003 THOMSON DERWENT
AN 2002-557722 [59] WPIDS
DNC C2002-158349
TI Composition for treating animal for high somatic cell count and reducing **fecal shedding** of microbe in intestinal tract of animal has two siderophore receptors and porins of gram negative microbe and lipopolysaccharide.
DC B04 C03 D16
IN EMERY, D A; KALLEVIG, G K; STRAUB, D E; ZAMMERT, D E
PA (EMER-I) EMERY D A; (KALL-I) KALLEVIG G K; (STRA-I) STRAUB D E; (ZAMM-I) ZAMMERT D E; (WILL-N) WILLMAR POULTRY CO INC
CYC 97
PI WO 2002053180 A2 20020711 (200259)* EN 83p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
US 2003036639 A1 20030220 (200316)
ADT WO 2002053180 A2 WO 2002-US188 20020103; US 2003036639 A1 Provisional US 2001-259504P 20010103, Provisional US 2001-262896P 20010119, US 2002-38504 20020103
PRAI US 2001-262896P 20010119; US 2001-259504P 20010103; US 2002-38504 20020103
AB WO 200253180 A UPAB: 20020916
NOVELTY - A composition (I) comprising at least two siderophore receptor polypeptides (SRPs) isolated from a gram negative microbe (II), at least two porins isolated from (II), and lipopolysaccharide (LPS) at a concentration not greater than about 10.0 endotoxin unit/ml (EU/ml), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) inducing (M1) the production of antibody in an animal, by administering a composition comprising at least four SRPs isolated from a gram positive microbe and a pharmaceutically acceptable carrier to the animal; and

(2) isolating (M2) outer membrane polypeptides, by providing (II), disrupting (II) in a buffer, solubilizing the disrupted (II), and isolating molecules of (II), where the isolated molecules comprise outer membrane polypeptides comprising at least two SRPs and at least two porins, and LPS at a concentration not greater than about 10.0 EU/ml.

ACTIVITY - Antiinflammatory; Antimicrobial.

MECHANISM OF ACTION - **Vaccine**.

The efficacy of a **Salmonella** dublin **vaccine** consisting of Siderophore receptor proteins (SRPs) and porins was carried out against a live virulent challenge in mice. Sixty female CF-1 mice weighing 16-22 g were equally distributed into 6 polycarbonate mouse cages designated as groups 1-6. The composition including siderophore receptor proteins and porins was prepared as a protein suspension (77.5 ml) emulsified to give a final dose of 125 mu g total protein in a 0.25 ml injectable volume at a 22.5% v/v adjuvant concentration. The mouse dose was adjusted to a field dose of 1 mg/2 ml. Potency of the **vaccine** was tested at four different concentrations: non-diluted (Group 1), 1:10 (Group 2), 1:100 (Group 3) and 1:1000 (Group 4) compared to two control groups, a non **vaccinated** challenged group (Group 5) and a non-**vaccinated** challenge group (Group 6). Mice were **vaccinated** intraperitoneally and revaccinated 14 days after first **vaccination** with 0.25 cc. Fourteen days after the second **vaccination**, mice in groups 1-5 were intraperitoneally challenged with 1.7 multiply 108 colony forming units (CFU) of a virulent S.dublin isolate. Mortality was recorded daily for 2 weeks post-challenge. Ten (100%) of the non-**vaccinated** mice (Group 5) died within 14 days after challenge. In contrast, none of the mice died given the non-diluted **vaccine** of group 1. All dilutions of the test **vaccine** showed a high degree of protection as compared to the non-**vaccinated**/challenged mice of Group 5. None of the mice died in group 6 showing no horizontal transmission of the organism between the groups.

USE - (I) is useful for inducing the production of antibody in an animal e.g. avian, bovine, caprine, porcine or ovine, for treating an animal for a high somatic cell count, for reducing **fecal shedding** of a microbe in an animal's intestinal tract, for treating an animal for low milk production, and for treating mastitis and metritis in a milk producing animal (claimed). (I) is useful for treating a condition associated with a microbial infection.

Dwg.0/10

L10 ANSWER 17 OF 19 WPIDS (C) 2003 THOMSON DERWENT
AN 2001-639093 [73] WPIDS
DNC C2001-189033
TI **Vaccine** composition useful for conferring protective immunity in a non-rodent animal, comprises first attenuated, non-reverting mutant **Salmonella** bacterium having two or more inactivated genes within SPI2 region.
DC B04 C06 D16
IN KENNEDY, M J; LOWERY, D E
PA (PHAA) PHARMACIA & UPJOHN CO; (PHAA) PHARMACIA & UPJOHN
CYC 96
PI WO 2001070247 A2 20010927 (200173)* EN 58p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001056957 A 20011003 (200210)
BR 2001009322 A 20021210 (200308)
EP 1267899 A2 20030102 (200310) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
ADT WO 2001070247 A2 WO 2001-US8042 20010313; AU 2001056957 A AU 2001-56957 20010313; BR 2001009322 A BR 2001-9322 20010313, WO 2001-US8042 20010313; EP 1267899 A2 EP 2001-930419 20010313, WO 2001-US8042 20010313
FDT AU 2001056957 A Based on WO 200170247; BR 2001009322 A Based on WO 200170247; EP 1267899 A2 Based on WO 200170247
PRAI US 2000-190178P 20000317

AB WO 200170247 A UPAB: 20011211
NOVELTY - A **vaccine** composition (I) comprising an immunologically protective amount of a first attenuated, non-reverting mutant **Salmonella** bacterium in which two or more genes (G) within the SPI2 region have been inactivated, is new.

ACTIVITY - Antibacterial.

MECHANISM OF ACTION - **Vaccine**.

No supporting data given.

USE - (I) is useful for conferring protective immunity on a non-rodent animal, by administering (I) to the animal, such that an improvement in mortality, symptomatic diarrhea, physical condition and milk production are provided. (I) is useful for reducing the amount or duration of bacterial shedding by about 10% or more during infection in a non-rodent animal e.g. cattle, sheep, goats, horses, pigs, poultry and other birds, cats, dogs and humans. (I) is useful for delivering a polypeptide antigen to an animal (claimed).

(I) is also useful for providing benefit to veterinary and human community health.

ADVANTAGE - (I) is a safe and efficacious live **vaccine**, which need not be administered at a very large doses. The mutant bacteria containing inactivations in two different genes are non-reverting, or at least much less likely to revert to a virulent state. The safety and efficacy of a live-attenuated S. dublin Delta ssaC, Delta ssaJ or Delta ssaT mutant as **vaccines** was determined in cattle. Live-attenuated S. dublin strains were delivered to animals, and baseline temperatures and clinical scores (mortality, physical condition, inactivation, diarrhea (**fecal** score), and **shedding** of bacteria) were recorded on Days 1-4.

The calves were orally **vaccinated** on Day 4 with 1 multiply 109 CFUs/calf of wild or mutant bacteria, and monitored daily for clinical symptoms for 28 days post-**vaccination** (Days 5-32), of which Days 29-32 were considered as baseline before challenge with wild type bacteria. The calves were then challenged with a highly virulent, heterologous wild type S.dublin, which was a field isolate obtained from a case of bovine salmonellosis, at 28 days post-**vaccination** (Day 32).

The calves continued to be monitored for clinical symptoms for further 14 days post-challenge (Days 33-46). Necropsy was performed on Day 46 or at death, and tissue and fecal samples were obtained for culture of the challenge organism. The data from culturing of tissue (greater than 2 g) or fecal (greater than 2 g) samples showed that there was a reduction of the challenge strain in the tissues from animals **vaccinated** with the SPI2 mutants compared to the naive controls, and that oral administration of each of the three mutants as a **vaccine** was safe and efficacious against experimentally induced salmonellosis.

Protective effects seen with the SPI2 mutants were better than those observed with Delta yca Delta crp mutants.

Dwg.0/4

L10 ANSWER 18 OF 19 LIFESCI COPYRIGHT 2003 CSA
AN 97:115357 LIFESCI
TI Safety and efficacy of an avirulent live **Salmonella** choleraesuis **vaccine** for protection of calves against S. dublin infection
AU Fox, B.C.; Roof, M.B.; Carter, D.P.; Kesl, L.D.; Roth, J.A.*
CS Dep. Microbiol., Immun., and Prev. Med., Coll. Veterinary Med., Iowa State Univ., Ames, IA 50011, USA
SO MOL. PHARMACOL., (19970200) vol. 51, no. 2, pp. 265-271. ISSN: 0026-895X.
DT Journal
FS J; F
LA English
SL English
AB We evaluated the safety and efficacy of avirulent live **Salmonella**

choleraesuis strain 54 (SC54) as a **vaccine** to protect calves against salmonellosis caused by S. dublin. All calves were challenge exposed orally with 1.74 x 10 super(9) CFU of virulent S. dublin 14 days after **vaccination**. Clinical signs and **Salmonella** shedding were monitored for 28 days after **vaccination**. Calves were necropsied, and organs were cultured for **Salmonella** sp 14 days after challenge exposure. **Salmonella** dublin challenge exposure resulted in mild clinical signs of salmonellosis. All **vaccinated** groups had significantly lower rectal temperature, **fecal shedding** of S. dublin, and recovery of S. dublin from organs after necropsy. SC54 was not recovered from fecal or blood samples collected after **vaccination** or from injection site samples or organs collected at necropsy. SC54 given intranasally or SC to calves was safe and significantly reduced clinical signs and bacterial shedding after oral challenge exposure with S. dublin.

L10 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2003 ACS
AN 2001:359833 CAPLUS
DN 134:352273
TI Live bacterial **vaccines** against Escherichia coli O157:H7
IN Perry, Malcolm B.; Conlan, J. Wayne
PA National Research Council of Canada, Can.
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001034190	A2	20010517	WO 2000-CA1321	20001110
	WO 2001034190	A3	20011108		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1227839	A2	20020807	EP 2000-975694	20001110
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRAI	US 1999-164564P	P	19991110		
	US 2000-190934P	P	20000321		
	WO 2000-CA1321	W	20001110		

AB Disclosed are novel live bacterial **vaccines** against Escherichia coli O157:H7, to treat or prevent colonization of the gastrointestinal tract of a vertebrate by the pathogen. The **vaccines** comprise an effective amt. of non-pathogenic bacteria naturally expressing the O157 antigen or a structural mimic thereof as a part of their lipopolysaccharide. In a preferred embodiment, the non-pathogenic bacteria are selected from bacterial strains of the genus **Salmonella** or Citrobacter. The **vaccines** of the invention are particularly useful in maintaining cattle herds free of E. coli O157:H7 and in reducing carriage and **fecal shedding** of E. coli O157:H7 prior to slaughter, thus potentially reducing the clin. incidence of E. coli O157:H7 infections in humans.

=> d his

(FILE 'HOME' ENTERED AT 10:28:47 ON 03 JUL 2003)

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     FILE 'BIOSIS, MEDLINE, AGRICOLA, EMBASE, CABA, WPIDS, JAPIO, BIOTECHDS,
     LIFESCI, CAPLUS' ENTERED AT 10:29:05 ON 03 JUL 2003
L1          242 S SALMONELLA AND FECAL (5A) SHEDDING
L2            0 S L1 AND SRP (5A) PORIN?
L3            2 S L1 AND SIDEROPHORE?
L4            2 S L1 AND PORIN?
L5            1 S L1 AND OUTER MEMBRANE PROTEIN
L6            0 S L1 AND TRANSMEMBRANE
L7            0 S L1 AND TRANSMEMBRANE
L8            0 S L1 AND ENTEROCHELIN
L9           96 DUP REM L1 (146 DUPLICATES REMOVED)
L10          19 S L9 AND VACCIN?

=> s l9 and srp
L11           0 L9 AND SRP

=> d bib 1-96 l9

L9   ANSWER 1 OF 96  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE
     1
AN   2003:127814  BIOSIS
DN   PREV200300127814
TI   Molecular and phenotypic analysis of the CS54 island of Salmonella
     enterica serotype typhimurium: Identification of intestinal colonization
     and persistence determinants.
AU   Kingsley, Robert A.; Humphries, Andrea D.; Weening, Eric H.; de Zoete,
     Marcel R.; Winter, Sebastian; Papaconstantinopoulou, Anastasia; Dougan,
     Gordon; Baumler, Andreas J. (1)
CS   (1) Department of Medical Microbiology and Immunology, College of
     Medicine, Texas A and M University System Health Science Center, Reynolds
     Medical Building, College Station, TX, 77843-1114, USA: abaumler@tamu.edu
     USA
SO   Infection and Immunity, (February 2003, 2003) Vol. 71, No. 2, pp. 629-640.
     print.
     ISSN: 0019-9567.
DT   Article
LA   English

L9   ANSWER 2 OF 96     MEDLINE                          DUPLICATE 2
AN   2003129097     MEDLINE
DN   22530103   PubMed ID: 12643501
TI   Effect of feeding the ionophores monensin and laidlomycin propionate and
     the antimicrobial bambermycin to sheep experimentally infected with E.
     coli O157:H7 and Salmonella typhimurium.
AU   Edrington T S; Callaway T R; Bischoff K M; Genovese K J; Elder R O;
     Anderson R C; Nisbet D J
CS   Food and Feed Safety Research Unit, Southern Plains Agricultural Research
     Center, USDA, ARS, College Station, TX 77845, USA..
     edrington@ffsru.tamu.edu
SO   JOURNAL OF ANIMAL SCIENCE, (2003 Feb) 81 (2) 553-60.
     Journal code: 8003002. ISSN: 0021-8812.
CY   United States
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals
EM   200306
ED   Entered STN: 20030320
     Last Updated on STN: 20030621
     Entered Medline: 20030620

L9   ANSWER 3 OF 96  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE
     3
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AN 2003:134871 BIOSIS
DN PREV200300134871
TI Effect of previous antimicrobial treatment on **fecal shedding** of **Salmonella** enterica subsp. enterica serogroup B in New York dairy herds with recent clinical salmonellosis.
AU Warnick, L. D. (1); Kanistanon, K.; McDonough, P. L.; Power, L.
CS (1) Department of Population Medicine and Diagnostic Sciences, College of Veterinary Medicine, Cornell University, Ithaca, NY, 14853, USA: ldw3@cornell.edu USA
SO Preventive Veterinary Medicine, (15 January 2003) Vol. 56, No. 4, pp. 285-297. print.
ISSN: 0167-5877.
DT Article
LA English

L9 ANSWER 4 OF 96 WPIDS (C) 2003 THOMSON DERWENT DUPLICATE 4
AN 2002-557722 [59] WPIDS
DNC C2002-158349
TI Composition for treating animal for high somatic cell count and reducing **fecal shedding** of microbe in intestinal tract of animal has two siderophore receptors and porins of gram negative microbe and lipopolysaccharide.
DC B04 C03 D16
IN EMERY, D A; KALLEVIG, G K; STRAUB, D E; ZAMMERT, D E
PA (EMER-I) EMERY D A; (KALL-I) KALLEVIG G K; (STRA-I) STRAUB D E; (ZAMM-I) ZAMMERT D E; (WILL-N) WILLMAR POULTRY CO INC
CYC 97
PI WO 2002053180 A2 20020711 (200259)* EN 83p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
US 2003036639 A1 20030220 (200316)
ADT WO 2002053180 A2 WO 2002-US188 20020103; US 2003036639 A1 Provisional US 2001-259504P 20010103, Provisional US 2001-262896P 20010119, US 2002-38504 20020103
PRAI US 2001-262896P 20010119; US 2001-259504P 20010103; US 2002-38504 20020103

L9 ANSWER 5 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5
AN 2003:13071 BIOSIS
DN PREV200300013071
TI Brewers dried yeast as a source of mannan oligosaccharides for weanling pigs.
AU White, L. A.; Newman, M. C.; Cromwell, G. L. (1); Lindemann, M. D.
CS (1) University of Kentucky, Lexington, KY, 40546, USA: gcromwel@uky.edu USA
SO Journal of Animal Science, (October 2002, 2002) Vol. 80, No. 10, pp. 2619-2628. print.
ISSN: 0021-8812.
DT Article
LA English

L9 ANSWER 6 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 6
AN 2003:9946 BIOSIS
DN PREV200300009946
TI Prevalence of **Salmonella** and Campylobacter in beef cattle from transport to slaughter.
AU Beach, John C.; Murano, Elsa A. (1); Acuff, Gary R.

CS (1) Department of Animal Science, Texas A and M University, 310 Kleberg, College Station, TX, 77843-2471, USA: eamurano@tamu.edu USA
SO Journal of Food Protection, (November 2002, 2002) Vol. 65, No. 11, pp. 1687-1693. print.
ISSN: 0362-028X.
DT Article
LA English

L9 ANSWER 7 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 7
AN 2002:244496 BIOSIS
DN PREV200200244496
TI Persistent **fecal Salmonella shedding** in five dairy herds.
AU Huston, Carla L.; Wittum, Thomas E. (1); Love, Brenda C.
CS (1) Department of Veterinary Preventive Medicine, College of Veterinary Medicine, Ohio State University, Columbus, OH, 43210-1092 USA
SO Journal of the American Veterinary Medical Association, (March 1, 2002) Vol. 220, No. 5, pp. 650-655. print.
ISSN: 0003-1488.
DT Article
LA English

L9 ANSWER 8 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 8
AN 2002:244495 BIOSIS
DN PREV200200244495
TI Prevalence of **fecal shedding** of **Salmonella** spp in dairy herds.
AU Huston, Carla L.; Wittum, Thomas E. (1); Love, Brenda C.; Keen, James E.
CS (1) Department of Veterinary Preventive Medicine, College of Veterinary Medicine, Ohio State University, Columbus, OH, 43210-1092 USA
SO Journal of the American Veterinary Medical Association, (March 1, 2002) Vol. 220, No. 5, pp. 645-649. print.
ISSN: 0003-1488.
DT Article
LA English

L9 ANSWER 9 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 9
AN 2002:548679 BIOSIS
DN PREV200200548679
TI Characteristics of **Salmonella** enteritidis contamination in eggs after oral, aerosol, and intravenous inoculation of laying hens.
AU Gast, Richard K. (1); Guard-Petter, Jean (1); Holt, Peter S. (1)
CS (1) Agricultural Research Service, Southeast Poultry Research Laboratory, United States Department of Agriculture, 934 College Station Road, Athens, GA, 30605 USA
SO Avian Diseases, (July September, 2002) Vol. 46, No. 3, pp. 629-635. print.
ISSN: 0005-2086.
DT Article
LA English

L9 ANSWER 10 OF 96 CABA COPYRIGHT 2003 CABI
AN 2003:47387 CABA
DN 20033016880
TI Effect of previous antimicrobial treatment on **fecal shedding** of **Salmonella** enterica subsp. enterica serogroup B in New York dairy herds with recent clinical salmonellosis
AU Warnick, L. D.; Kanistanon, K.; McDonough, P. L.; Power, L.
CS Department of Population Medicine and Diagnostic Sciences, College of Veterinary Medicine, Cornell University, Ithaca, NY 14853, USA.
SO Preventive Veterinary Medicine, (2002) Vol. 56, No. 4, pp. 285-297. 26

ref.
Publisher: Elsevier Science B.V. Amsterdam
ISSN: 0167-5877
CY Netherlands Antilles
DT Journal
LA English

L9 ANSWER 11 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2002:546505 BIOSIS
DN PREV200200546505
TI Effect of co-mingling stress on **fecal shedding** of **Salmonella** typhimurium by early weaned piglets.
AU Callaway, T. R. (1); Morrow, J. L.; Edrington, T. S. (1); Genovese, K. J. (1); Elder, R. O. (1); Dailey, J. W.; Anderson, R. C. (1); Nisbet, D. J. (1)
CS (1) Agricultural Research Service, Food and Feed Safety Research Unit, USDA, College Station, TX USA
SO Journal of Dairy Science, (2002) Vol. 85, No. Supplement 1, pp. 151. http://www.ADSA.org/jds. print.
Meeting Info.: Meeting of the American Society of Animal Science and the American Dairy Science Association Quebec City, Quebec, Canada July 20-25, 2002 American Society of Animal Science
. ISSN: 0022-0302.
DT Conference
LA English

L9 ANSWER 12 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 10
AN 2002:392800 BIOSIS
DN PREV200200392800
TI Factors associated with **fecal-shedding** of **Salmonella** spp by horses on US operations.
AU Losinger, W. C. (1); Traub-Dargatz, J. L.; Garber, L. P.; Fedorka-Cray, P. J.; Ladely, S.; Ferris, K. E.; Morgan, K.
CS (1) New Brunswick Laboratory, United States Department of Energy, 9800 South Cass Avenue, Bldg 350, Argonne, IL, 60439: wlosinger1@netscape.net USA
SO Arquivo Brasileiro de Medicina Veterinaria e Zootecnia, (Abril, 2002) Vol. 54, No. 2, pp. 109-116. print.
ISSN: 0102-0935.
DT Article
LA English

L9 ANSWER 13 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 11
AN 2002:515953 BIOSIS
DN PREV200200515953
TI Positive effects of diet change on shedding of **Salmonella** spp. in the feces of captive felids.
AU Lewis, Charles E.; Bemis, David A.; Ramsay, Edward C. (1)
CS (1) Department of Comparative Medicine, College of Veterinary Medicine, P.O. Box 1071, Knoxville, TN, 37901-1071 USA
SO Journal of Zoo and Wildlife Medicine, (March, 2002) Vol. 33, No. 1, pp. 83-84. print.
ISSN: 1042-7260.
DT Article
LA English

L9 ANSWER 14 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2002:344542 BIOSIS
DN PREV200200344542
TI Evaluation of **Salmonella** shedding in cattle fed recycled poultry bedding.

AU Capucille, Dawn J. (1); Poore, Matthew H.; Altier, Craig; Rogers, Glenn M.
CS (1) Dept. of Farm Animal Health and Resource Management, College of Veterinary Medicine, North Carolina State University, Raleigh, NC, 27606 USA
SO Bovine Practitioner, (February, 2002) Vol. 36, No. 1, pp. 15-21. print. ISSN: 0524-1685.
DT Article
LA English

L9 ANSWER 15 OF 96 WPIDS (C) 2003 THOMSON DERWENT
AN 2001-639093 [73] WPIDS
DNC C2001-189033
TI Vaccine composition useful for conferring protective immunity in a non-rodent animal, comprises first attenuated, non-reverting mutant **Salmonella** bacterium having two or more inactivated genes within SPI2 region.
DC B04 C06 D16
IN KENNEDY, M J; LOWERY, D E
PA (PHAA) PHARMACIA & UPJOHN CO; (PHAA) PHARMACIA & UPJOHN
CYC 96
PI WO 2001070247 A2 20010927 (200173)* EN 58p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001056957 A 20011003 (200210)
BR 2001009322 A 20021210 (200308)
EP 1267899 A2 20030102 (200310) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
ADT WO 2001070247 A2 WO 2001-US8042 20010313; AU 2001056957 A AU 2001-56957 20010313; BR 2001009322 A BR 2001-9322 20010313, WO 2001-US8042 20010313; EP 1267899 A2 EP 2001-930419 20010313, WO 2001-US8042 20010313
FDT AU 2001056957 A Based on WO 200170247; BR 2001009322 A Based on WO 200170247; EP 1267899 A2 Based on WO 200170247
PRAI US 2000-190178P 20000317

L9 ANSWER 16 OF 96 CAPLUS COPYRIGHT 2003 ACS
AN 2001:359833 CAPLUS
DN 134:352273
TI Live bacterial vaccines against Escherichia coli O157:H7
IN Perry, Malcolm B.; Conlan, J. Wayne
PA National Research Council of Canada, Can.
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001034190	A2	20010517	WO 2000-CA1321	20001110
	WO 2001034190	A3	20011108		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1227839 A2 20020807 EP 2000-975694 20001110
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRAI US 1999-164564P P 19991110
US 2000-190934P P 20000321
WO 2000-CA1321 W 20001110

L9 ANSWER 17 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 12
AN 2002:41321 BIOSIS
DN PREV200200041321
TI Evaluation of an autogenous **Salmonella** bacterin and a modified live **Salmonella** serotype Choleraesuis vaccine on a commercial dairy farm.
AU House, John K. (1); Ontiveros, Monica M. (1); Blackmer, Nicole M. (1); Dueger, Erica L. (1); Fitchhorn, Jennifer B. (1); McArthur, Gary R.; Smith, Bradford P. (1)
CS (1) Department of Medicine and Epidemiology, School of Veterinary Medicine, University of California, Davis, CA, 95616 USA
SO American Journal of Veterinary Research, (December, 2001) Vol. 62, No. 12, pp. 1897-1902. print.
ISSN: 0002-9645.
DT Article
LA English

L9 ANSWER 18 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 13
AN 2001:165964 BIOSIS
DN PREV200100165964
TI Factors associated with **Salmonella** shedding among equine colic patients at a veterinary teaching hospital.
AU Kim, Lisa'Marie; Morley, Paul S. (1); Traub-Dargatz, Josie L.; Salman, M. D.; Gentry-Weeks, Claudia
CS (1) Department of Clinical Sciences, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO, 80523 USA
SO Journal of the American Veterinary Medical Association, (March 1, 2001) Vol. 218, No. 5, pp. 740-748. print.
ISSN: 0003-1488.
DT Article
LA English
SL English

L9 ANSWER 19 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 14
AN 2001:214266 BIOSIS
DN PREV200100214266
TI **Fecal shedding** of Giardia duodenalis, Cryptosporidium parvum, **Salmonella** organisms, and Escherichia coli O157:H7 from llamas in California.
AU Rulofson, Franz C. (1); Atwill, Edward R.; Holmberg, Charles A.
CS (1) University of California Cooperative Extension, Sonora, CA, 95370 USA
SO American Journal of Veterinary Research, (April, 2001) Vol. 62, No. 4, pp. 637-642. print.
ISSN: 0002-9645.
DT Article
LA English
SL English

L9 ANSWER 20 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 15
AN 2001:337047 BIOSIS
DN PREV200100337047

TI Comparison of heterophil phagocytosis for heterophil-adapted **Salmonella** enteritidis (HASE) and wild-type **Salmonella** enteritidis (SE.
AU Andreasen, Claire B. (1); Akunda, Jacqueline K.; Kramer, Ted T.
CS (1) Department of Veterinary Pathology, College of Veterinary Medicine, Ames, IA, 50011 USA
SO Avian Diseases, (April June, 2001) Vol. 45, No. 2, pp. 432-436. print. ISSN: 0005-2086.
DT Article
LA English
SL English; Spanish

L9 ANSWER 21 OF 96 MEDLINE
AN 2001523178 MEDLINE
DN 21454763 PubMed ID: 11570171
TI Risk factors associated with **Salmonella** enterica prevalence in three-site swine production systems in North Carolina, USA.
AU Funk J A; Davies P R; Gebreyes W
CS Department of Farm Animal Health and Resource Management, College of Veterinary Medicine, North Carolina State University, 4700 Hillsborough St., Raleigh, North Carolina 27606, USA.. funk.74@osu.edu
SO BERLINER UND MUNCHENER TIERARZTLICHE WOCHENSCHRIFT, (2001 Sep-Oct) 114 (9-10) 335-8.
Journal code: 0003163. ISSN: 0005-9366.
CY Germany: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200201
ED Entered STN: 20010926
Last Updated on STN: 20020201
Entered Medline: 20020131

L9 ANSWER 22 OF 96 CAPLUS COPYRIGHT 2003 ACS
AN 2001:452345 CAPLUS
DN 135:287727
TI Dietary effects on the microbiological safety of food
AU Leitch, E. Carol McWilliam; Duncan, Sylvia H.; Stanley, Karen N.; Stewart, Colin S.
CS Gut Microbiology and Immunology Division, Rowett Research Institute, Bucksburn, Aberdeen, AB21 9SB, UK
SO Proceedings of the Nutrition Society (2001), 60(2), 247-255
CODEN: PNUSA4; ISSN: 0029-6651
PB CABI Publishing
DT Journal
LA English
RE.CNT 72 THERE ARE 72 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 23 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2002:201330 BIOSIS
DN PREV200200201330
TI Detection of **Salmonella** spp. in fecal specimens by real-time PCR.
AU Kurowski, P. (1); Traub-Dargatz, J. (1); Morley, P. (1); Gentry-Weeks, C. R. (1)
CS (1) Colorado State University, Fort Collins, CO USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (2001) Vol. 101, pp. 245. http://www.asmusa.org/mtgsrc/generalmeeting.htm. print.
Meeting Info.: 101st General Meeting of the American Society for Microbiology Orlando, FL, USA May 20-24, 2001
ISSN: 1060-2011.

DT Conference
LA English

L9 ANSWER 24 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 16
AN 2001:222300 BIOSIS
DN PREV200100222300
TI **Fecal shedding** and antimicrobial susceptibility of selected bacterial pathogens and a survey of intestinal parasites in free-living waterfowl.
AU Fallacara, D. M.; Monahan, C. M.; Morishita, T. Y. (1); Wack, R. F.
CS (1) Department of Veterinary Preventive Medicine, Ohio State University, 1900 Coffey Road, Columbus, OH, 43210 USA
SO Avian Diseases, (January March, 2001) Vol. 45, No. 1, pp. 128-135. print. ISSN: 0005-2086.
DT Article
LA English
SL English; Spanish

L9 ANSWER 25 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 17
AN 2002:582686 BIOSIS
DN PREV200200582686
TI Farm and management variables linked to **fecal shedding** of Campylobacter and **Salmonella** in commercial squab production.
AU Jeffrey, J. S. (1); Atwill, E. R.; Hunter, A.
CS (1) Departments of Population, Health and Reproduction and Veterinary Extension, Veterinary Medicine Teaching and Research Center, University of California-Davis, 18830 Road 112, Tulare, CA, 93274: jjeffrey@vmtrc.ucdavis.edu USA
SO Poultry Science, (January, 2001) Vol. 80, No. 1, pp. 66-70. print. ISSN: 0032-5791.
DT Article
LA English

L9 ANSWER 26 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 18
AN 2001:496730 BIOSIS
DN PREV200100496730
TI Longitudinal study of **Salmonella** enterica in growing pigs reared in multiple-site swine production systems.
AU Funk, J. A. (1); Davies, P. R.; Nichols, M. A.
CS (1) Department of Veterinary Preventive Medicine, College of Veterinary Medicine, Ohio State University, 1900 Coffey Road, Columbus, OH, 43210: funk.74@osu.edu USA
SO Veterinary Microbiology, (22 October, 2001) Vol. 83, No. 1, pp. 45-60. print.
ISSN: 0378-1135.
DT Article
LA English
SL English

L9 ANSWER 27 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 19
AN 2001:84373 BIOSIS
DN PREV200100084373
TI **Fecal shedding** of **Salmonella** spp. by dairy cows on farm and at cull cow markets.
AU Wells, S. J. (1); Fedorka-Cray, P. J.; Dargatz, D. A.; Ferris, K.; Green, A.
CS (1) Department of Clinical and Population Sciences, College of Veterinary Medicine, University of Minnesota, Saint Paul, MN, 55108: wells023@tc.umn.edu USA

SO Journal of Food Protection, (January, 2001) Vol. 64, No. 1, pp. 3-11. print.
ISSN: 0362-028X.
DT Article
LA English
SL English

L9 ANSWER 28 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 20
AN 2000:218453 BIOSIS
DN PREV200000218453
TI The shdA gene is restricted to serotypes of **Salmonella** enterica subspecies I and contributes to efficient and prolonged **fecal shedding**.
AU Kingsley, Robert A.; van Amsterdam, Karin; Kramer, Naomi; Baumler, Andreas J. (1)
CS (1) Department of Medical Microbiology and Immunology, College of Medicine, Texas A and M University Health Science Center, 407 Reynolds Medical Building, College Station, TX, 77843-1114 USA
SO Infection and Immunity, (May, 2000) Vol. 68, No. 5, pp. 2720-2727.
ISSN: 0019-9567.
DT Article
LA English
SL English

L9 ANSWER 29 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 21
AN 2000:218335 BIOSIS
DN PREV200000218335
TI Pathogenic role of SEF14, SEF17, and SEF21 fimbriae in **Salmonella** enterica serovar Enteritidis infection of chickens.
AU Rajashekara, Gireesh; Munir, Shirin; Alexeyev, Mikhail F.; Halvorson, David A.; Wells, Carol L.; Nagaraja, Kakambi V. (1)
CS (1) Department of Veterinary PathoBiology, University of Minnesota, 1971 Commonwealth Ave., Saint Paul, MN, 55108 USA
SO Applied and Environmental Microbiology, (April, 2000) Vol. 66, No. 4, pp. 1759-1763.
ISSN: 0099-2240.
DT Article
LA English
SL English

L9 ANSWER 30 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 22
AN 2000:316026 BIOSIS
DN PREV200000316026
TI Effects of antibiotic regimens on the **fecal shedding** patterns of pigs infected with **Salmonella** Typhimurium.
AU Ebner, Paul D. (1); Mathew, Alan G.
CS (1) Department of Animal Science, Institute of Agriculture, The University of Tennessee, Knoxville, TN, 37996 USA
SO Journal of Food Protection, (June, 2000) Vol. 63, No. 6, pp. 709-714. print.
ISSN: 0362-028X.
DT Article
LA English
SL English

L9 ANSWER 31 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 23
AN 2000:239468 BIOSIS
DN PREV200000239468
TI Combined effect of antibiotic and competitive exclusion treatment on

Salmonella Enteritidis **fecal shedding** in molted laying hens.
AU Seo, K. H.; Holt, P. S. (1); Gast, R. K.; Hofacre, C. L.
CS (1) Agricultural Research Service, Southeast Poultry Research Laboratory, U.S. Department of Agriculture, 934 College Station Road, Athens, GA, 30605 USA
SO Journal of Food Protection, (April, 2000) Vol. 63, No. 4, pp. 545-548. ISSN: 0362-028X.
DT Article
LA English
SL English

L9 ANSWER 32 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 24
AN 2001:3589 BIOSIS
DN PREV200100003589
TI Pathologic and bacteriologic findings in 27-week-old commercial laying hens experimentally infected with **Salmonella** enteritidis, phage type 4.
AU Kinde, H. (1); Shivaprasad, H. L.; Daft, B. M. (1); Read, D. H. (1); Ardans, A.; Breitmeyer, R.; Rajashekara, G.; Nagaraja, K. V.; Gardner, I. A.
CS (1) School of Veterinary Medicine, California Veterinary Diagnostic Laboratory System, University of California, Davis, San Bernardino Branch, 105 West Central Avenue, San Bernardino, CA, 92408 USA
SO Avian Diseases, (April June, 2000) Vol. 44, No. 2, pp. 239-248. print. ISSN: 0005-2086.
DT Article
LA English
SL English; Spanish

L9 ANSWER 33 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 25
AN 2000:402719 BIOSIS
DN PREV200000402719
TI **Fecal shedding** of **Salmonella** spp by horses in the United States during 1998 and 1999 and detection of **Salmonella** spp in grain and concentrate sources on equine operations.
AU Traub-Dargatz, Josie L. (1); Garber, Lindsey P.; Fedorka-Cray, Paula J.; Ladely, Scott; Ferris, Kathy E.
CS (1) Department of Clinical Sciences, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, CO, 80523 USA
SO Journal of the American Veterinary Medical Association, (July 15, 2000) Vol. 217, No. 2, pp. 226-230. print. ISSN: 0003-1488.
DT Article
LA English
SL English

L9 ANSWER 34 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 26
AN 2000:540145 BIOSIS
DN PREV200000540145
TI Competitive exclusion treatment reduces the mortality and **fecal shedding** associated with enterotoxigenic Escherichia coli infection in nursery-raised neonatal pigs.
AU Genovese, Kenneth J. (1); Anderson, Robin C.; Harvey, Roger B.; Nisbet, David J.
CS (1) Southern Plains Agricultural Research Center, United States Department of Agriculture, Agricultural Research Service, 2881 F and B Road, College Station, TX, 77845 USA

SO Canadian Journal of Veterinary Research, (October, 2000) Vol. 64, No. 4, pp. 204-207. print.
ISSN: 0830-9000.
DT Article
LA English
SL English; French

L9 ANSWER 35 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 27
AN 2000:131891 BIOSIS
DN PREV200000131891
TI Risk factors for **fecal shedding** of **Salmonella** in 91 US dairy herds in 1996.
AU Kabagambe, E. K. (1); Wells, S. J.; Garber, L. P.; Salman, M. D.; Wagner, B.; Fedorka-Cray, P. J.
CS (1) Department of Epidemiology and Community Health, School of Veterinary Medicine, Louisiana State University, Baton Rouge, LA, 70803 USA
SO Preventive Veterinary Medicine., (Feb. 1, 2000) Vol. 43, No. 3, pp. 177-194.
ISSN: 0167-5877.
DT Article
LA English
SL English

L9 ANSWER 36 OF 96 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003)
AN 2000:73949 AGRICOLA
DN IND22074999
TI Epidemiology of **Salmonella fecal shedding** in naturally infected Ohio dairy herds.
AU Taylor, C.L.; Wittum, T.E.
AV DNAL (SF961.A5)
SO Proceedings of the ... annual conference, Sept 2000. No. 33rd. p. 162
Publisher: Stillwater, OK : The Association, 1996-
NTE Meeting held on Sept. 21-23, 2000, Rapid City, South Dakota.
Includes references
CY Oklahoma; United States
DT Article; Conference
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L9 ANSWER 37 OF 96 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 2000382180 EMBASE
TI Transmission of rotavirus and other enteric pathogens in the home.
AU Dennehy P.H.
CS Dr. P.H. Dennehy, Div. of Pediatric Infect. Diseases, Rhode Island Hospital, 593 Eddy Street, Providence, RI 02903, United States
SO Pediatric Infectious Disease Journal, (2000) 19/10 SUPPL. (S103-S105).
Refs: 42
ISSN: 0891-3668 CODEN: PIDJEV
CY United States
DT Journal; General Review
FS 004 Microbiology
007 Pediatrics and Pediatric Surgery
037 Drug Literature Index
038 Adverse Reactions Titles
048 Gastroenterology
LA English
SL English

L9 ANSWER 38 OF 96 AGRICOLA Compiled and distributed by the National

 DUPLICATE 28

AN 2000:29335 AGRICOLA
DN IND22041694
TI **Fecal shedding** of **Salmonella** by gilts before and after introduction to a swine breeding farm.
AU Davies, P.R.; Funk, J.A.; Morrow, W.E.M.
CS Massey University, Palmerston North, NZ.
AV DNAL (SF971.N472)
SO Swine health and production : the official journal of the American Association of Swine Practitioners, Jan/Feb 2000. Vol. 8, No. 1. p. 25-29
Publisher: Perry, IA : American Association of Swine Practitioners.
ISSN: 1066-4963
NTE Includes references
CY Iowa; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L9 ANSWER 39 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 29
AN 2000:94703 BIOSIS
DN PREV200000094703
TI The effect of flavophospholipol (Flavomycin(R)) and salinomycin sodium (Sacox(R)) on the excretion of Clostridium perfringens, **Salmonella** enteritidis, and Campylobacter jejuni in broilers after experimental infection.
AU Bolder, N. M. (1); Wagenaar, J. A.; Putirulan, F. F.; Veldman, K. T.; Sommer, M.
CS (1) Institute for Animal Science and Health (ID-DLO), 8200 AB, Lelystad Netherlands
SO Poultry Science, (Dec., 1999) Vol. 78, No. 12, pp. 1681-1689.
ISSN: 0032-5791.
DT Article
LA English
SL English

L9 ANSWER 40 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 30
AN 1999:489824 BIOSIS
DN PREV199900489824
TI Effect of transportation and feed withdrawal on shedding of **Salmonella** Typhimurium among experimentally infected pigs.
AU Isaacson, Richard E. (1); Firkins, Lawrence D.; Weigel, Ronald M. (1); Zuckermann, Federico A. (1); DiPietro, Joseph A.
CS (1) Department of Veterinary Pathobiology, College of Veterinary Medicine, University of Illinois, Urbana, IL, 61802 USA
SO American Journal of Veterinary Research, (Sept., 1999) Vol. 60, No. 9, pp. 1155-1158.
ISSN: 0002-9645.
DT Article
LA English
SL English

L9 ANSWER 41 OF 96 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 2000014149 EMBASE
TI Prophylactic effects of Bifidobacterium longum HY8001 against Escherichia coli O157:H7 and **Salmonella** typhimurium DT104 enteric infection and evaluation of vero cytotoxin neutralizing effects.
AU Yang S.-J.; Yoon J.-W.; Seo K.-S.; Koo H.-C.; Kim S.-H.; Bae H.-S.; Baek Y.- J.; Park Y.-H.
CS S.-J. Yang, Department of Microbiology, College of Veterinary Medicine,

Seoul National University, Seoul, Korea, Republic of. soojinij@doum.net
SO Korean Journal of Applied Microbiology and Biotechnology, (1999) 27/5 (419-425).
Refs: 18
ISSN: 0257-2389 CODEN: SMHAEH
CY Korea, Republic of
DT Journal; Article
FS 004 Microbiology
LA Korean
SL English; Korean

L9 ANSWER 42 OF 96 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) DUPLICATE 31
AN 1999:78451 AGRICOLA
DN IND22015789
TI Epidemiology of **Salmonella fecal shedding** in subclinically infected dairy herds.
AU Taylor, C.L.; Wittum, T.E.
CS The Ohio State University.
AV DNAL (SF961.A5)
SO Proceedings of the ... annual conference, Sept 1999. No. 32nd. p. 246
Publisher: Stillwater, OK : The Association, 1996-
NTE Meeting held Sept. 23-26, 1999, Nashville, Tennessee.
Includes references
CY Oklahoma; United States
DT Article; Conference
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L9 ANSWER 43 OF 96 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) DUPLICATE 32
AN 2000:28404 AGRICOLA
DN IND22040076
TI **Fecal shedding** of **Salmonella** by a cohort of finishing pigs in North Carolina.
AU Davies, P.; Funk, J.; Morrow, W.E.M.
CS North Carolina State University, Raleigh, NC.
AV DNAL (SF971.N472)
SO Swine health and production : the official journal of the American Association of Swine Practitioners, Sept/Oct 1999. Vol. 7, No. 5. p. 231-234
Publisher: Perry, IA : American Association of Swine Practitioners.
ISSN: 1066-4963
NTE Includes references
CY Iowa; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L9 ANSWER 44 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1999:453463 BIOSIS
DN PREV199900453463
TI The effects of antibiotic regimens on **fecal shedding** patterns and bacterial resistance in pigs infected with **Salmonella** typhimurium.
AU Ebner, P. D. (1); Mathew, A. G. (1)
CS (1) University of Tennessee, Knoxville, TN USA
SO Journal of Animal Science, (1999) Vol. 77, No. SUPPL. 1, pp. 199.
Meeting Info.: Meeting of the American Society of Animal Science

Indianapolis, Indiana, USA July 21-23, 1999
ISSN: 0021-8812.
DT Conference
LA English

L9 ANSWER 45 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 33
AN 1999:78633 BIOSIS
DN PREV199900078633
TI **Fecal shedding** of **Salmonella** in a beef herd following a clinical outbreak.
AU Snell, Robert R. (1); Keen, Jim E.; Bradley, Sandy; Johnson, Jerre L.
CS (1) Burwell Vet. Hosp., Burwell, NE USA
SO Large Animal Practice, (Jan.-Feb., 1999) Vol. 20, No. 1, pp. 20, 22-24.
ISSN: 1092-7603.
DT Article
LA English

L9 ANSWER 46 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 34
AN 1998:512180 BIOSIS
DN PREV199800512180
TI Influence of **fecal shedding** of **Salmonella** organisms on mortality in hospitalized horses.
AU Mainar-Jaime, Raul C.; House, John K. (1); Smith, Bradford P.; Hird, David W.; House, Ann-Marie; Kamiya, Darin Y.
CS (1) Dep. Med. and Epidemiol., Sch. Veterinary Med., Univ. California, Davis, CA 95616-8737 USA
SO Journal of the American Veterinary Medical Association, (Oct. 15, 1998) Vol. 213, No. 8, pp. 1162-1166.
ISSN: 0003-1488.
DT Article
LA English

L9 ANSWER 47 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 35
AN 1998:481335 BIOSIS
DN PREV199800481335
TI Reduction of **fecal shedding** and egg contamination of **Salmonella** enteritidis by increasing the number of heterophil adaptations.
AU Kramer, Ted T.; Reinke, Chad R.; James, Michael
CS Veterinary Med. Res. Inst., Coll. Veterinary Med., Iowa State Univ., Ames, IA 50011 USA
SO Avian Diseases, (July-Sept., 1998) Vol. 42, No. 3, pp. 585-588.
ISSN: 0005-2086.
DT Article
LA English
SL English; Spanish

L9 ANSWER 48 OF 96 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003)
AN 1999:7974 AGRICOLA
DN IND21959891
TI Experimental and natural infection of early weaned pigs with **Salmonella** choleraesuis.
AU Anderson, R.C.; Nisbet, D.J.; Buckley, S.A.; Genovese, K.J.; Harvey, R.B.; DeLoach, J.R.; Keith, N.K.; Stanker, L.H.
CS BioScience Division of Milk Specialties Company, Dundee, IL.
AV DNAL (41.8 R312)
SO Research in veterinary science, May/June 1998. Vol. 64, No. 3. p. 261-262

Publisher: London, U.K. : W.B. Saunders Company Ltd.
CODEN: RVTSA9; ISSN: 0034-5288
NTE Includes references
CY England; United Kingdom
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L9 ANSWER 49 OF 96 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2003) DUPLICATE 36
AN 1998:87015 AGRICOLA
DN IND21812925
TI **Fecal shedding** of **Salmonella** by pigs housed in buildings with open-flush gutters.
AU Davies, P.
CS North Carolina State University, Raleigh, NC.
AV DNAL (SF971.N472)
SO Swine health and production : the official journal of the American Association of Swine Practitioners, May/June 1998. Vol. 6, No. 3. p. 101-106
Publisher: Perry, IA : American Association of Swine Practitioners.
ISSN: 1066-4963
NTE Includes references
CY Iowa; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L9 ANSWER 50 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 37
AN 1998:364283 BIOSIS
DN PREV199800364283
TI Prevalence of the **fecal shedding** of **Salmonella** organisms among captive green iguanas and potential public health implications.
AU Burnham, Bruce R. (1); Atchley, Daniel H. (1); Defusco, Russell P. (1); Ferris, Kathleen E.; Zicarelli, Jannell C. (1); Lee, John H. (1); Angulo, Frederick J.
CS (1) Dep. Biol., HQ USAFA/DFB, 2355 Fac. Dr., Ste. 2P389, USAF Acad. CO 80840 USA
SO Journal of the American Veterinary Medical Association, (July 1, 1998) Vol. 213, No. 1, pp. 48-50.
ISSN: 0003-1488.
DT Article
LA English

L9 ANSWER 51 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1998:532152 BIOSIS
DN PREV199800532152
TI Prevalence and risk factors for **Salmonella** shedding on U.S. dairy operations.
AU Wells, S. J. (1); Fedorka-Cray, P. J.; Kabagambe, E. K.
CS (1) USDA-APHIS-VSD Centers Epidemiol. and Animal Health, Ft. Collins, CO USA
SO Journal of Dairy Science, (1998) Vol. 81, No. SUPPL. 1, pp. 42.
Meeting Info.: Joint Meeting of the American Dairy Science Association and the American Society of Animal Science Denver, Colorado, USA July 28-31, 1998 Amercian Society of Animal Science
. ISSN: 0022-0302.
DT Conference
LA English

L9 ANSWER 52 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 38
AN 1998:213309 BIOSIS
DN PREV199800213309
TI Effects of heterophil adaptation on **Salmonella** enteritidis **fecal shedding** and egg contamination.
AU Kramer, T. T. (1)
CS (1) Vet. Med. Res. Inst., Coll. Vet. Med., Iowa State Univ., Ames, IA 50011 USA
SO Avian Diseases, (Jan.-March, 1998) Vol. 42, No. 1, pp. 6-13.
ISSN: 0005-2086.
DT Article
LA English
SL English; Spanish

L9 ANSWER 53 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 39
AN 1997:157379 BIOSIS
DN PREV199799456582
TI Host and viral factors affecting the decreased immunogenicity of Sabin type 3 vaccine after administration of trivalent oral polio vaccine to rural Mayan children.
AU Maldonado, Yvonne A. (1); Pena-Cruz, Victor; De La Luz Sanchez, Maria; Logan, Linda; Blandon, Stewart; Cantwell, Michael F.; Matsui, Suzanne M.; Millan-Velasco, Francisco; Valdespino, Jose Luis; Sepulveda, Jaime
CS (1) Dep. Pediatrics, Stanford Univ. Sch. Med., Stanford, CA 94305 USA
SO Journal of Infectious Diseases, (1997) Vol. 175, No. 3, pp. 545-553.
ISSN: 0022-1899.
DT Article
LA English

L9 ANSWER 54 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 40
AN 1997:125710 BIOSIS
DN PREV199799432213
TI Risk of shedding of **Salmonella** organisms by market-age hogs in a barn with open-flush gutters.
AU Davies, Peter R. (1); Morrow, W. E. Morgan; Jones, Frank T.; Deen, John (1); Fedorka-Cray, Paula J.; Gray, Jeffrey T.
CS (1) Dep. Food Animal Equine Med., Coll. Vet. Med., North Carolina State Univ., Raleigh, NC 27606 USA
SO Journal of the American Veterinary Medical Association, (1997) Vol. 210, No. 3, pp. 386-389.
ISSN: 0003-1488.
DT Article
LA English

L9 ANSWER 55 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 41
AN 1997:158535 BIOSIS
DN PREV199799457738
TI Safety and efficacy of an avirulent live **Salmonella** choleraesuis vaccine for protection of calves against S. dublin infection.
AU Fox, Bryce C.; Roof, Michael B.; Carter, David P.; Kesl, Lyle D.; Roth, James A. (1)
CS (1) Dep. Prev. Med., Coll. Vet. Med., Iowa State Univ., Ames, IA 50011 USA
SO American Journal of Veterinary Research, (1997) Vol. 58, No. 3, pp. 265-271.
ISSN: 0002-9645.
DT Article
LA English

L9 ANSWER 56 OF 96 LIFESCI COPYRIGHT 2003 CSA
AN 97:115357 LIFESCI
TI Safety and efficacy of an avirulent live **Salmonella** choleraesuis vaccine for protection of calves against S. dublin infection
AU Fox, B.C.; Roof, M.B.; Carter, D.P.; Kesl, L.D.; Roth, J.A.*
CS Dep. Microbiol., Immun., and Prev. Med., Coll. Veterinary Med., Iowa State Univ., Ames, IA 50011, USA
SO MOL. PHARMACOL., (19970200) vol. 51, no. 2, pp. 265-271. ISSN: 0026-895X.
DT Journal
FS J; F
LA English
SL English

L9 ANSWER 57 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 42
AN 1997:216772 BIOSIS
DN PREV199799523276
TI Evaluation of an aroA mutant **Salmonella** typhimurium vaccine in chickens using modified semisolid Rappaport Vassiliadis medium to monitor faecal shedding.
AU Tan, S. (1); Glyes, C. L.; Wilkie, B. N.
CS (1) Animal Disease Res. Inst., P.O. Box 11300, Station H, 3851 Fallowfield Road, Nepan, ON K2H 8P9 Canada
SO Veterinary Microbiology, (1997) Vol. 54, No. 3-4, pp. 247-254. ISSN: 0378-1135.
DT Article
LA English

L9 ANSWER 58 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 43
AN 1997:225342 BIOSIS
DN PREV199799517058
TI Applying tests for specific yolk antibodies to predict contamination by **Salmonella** enteritidis in eggs from experimentally infected laying hens.
AU Gast, Richard K. (1); Porter., Robert E., Jr.; Holt, Peter S.
CS (1) USDA-ARS, Southeast Poultry Res. Lab., 934 College Station Rd., Athens, GA 30605 USA
SO Avian Diseases, (1997) Vol. 41, No. 1, pp. 195-202. ISSN: 0005-2086.
DT Article
LA English
SL English; Spanish

L9 ANSWER 59 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 44
AN 1997:445216 BIOSIS
DN PREV199799744419
TI **Fecal shedding** of **Salmonella** in exotic felids.
AU Clyde, Victoria L. (1); Ramsay, Edward C.; Bemis, David A.
CS (1) Milwaukee County Zoo, Milwaukee, WI 53226 USA
SO Journal of Zoo and Wildlife Medicine, (1997) Vol. 28, No. 2, pp. 148-152. ISSN: 1042-7260.
DT Article
LA English

L9 ANSWER 60 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 45
AN 1997:118658 BIOSIS
DN PREV199799425161
TI A clinical trial of probiotic administration for prevention of

Salmonella shedding in the postoperative period in horses with colic.
AU Parraga, Maria E.; Spier, Sharon J. (1); Thurmond, Mark; Hirsh, Dwight
CS (1) Dep. Med. Epidemiol., Sch. Veterinary Med., Univ. California, Davis, CA 95616 USA
SO Journal of Veterinary Internal Medicine, (1997) Vol. 11, No. 1, pp. 36-41. ISSN: 0891-6640.
DT Article; (CLINICAL TRIAL)
LA English

L9 ANSWER 61 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 46
AN 1997:21044 BIOSIS
DN PREV199799320247
TI Experimental infection of laying hens with **Salmonella** enteritidis strains that express different types of fimbriae.
AU Thiagarajan, D.; Thacker, H. L.; Saeed, A. M. (1)
CS (1) Dep. Vet. Pathobiol., Sch. Vet. Med., Purdue Univ., West Lafayette, IN 47907 USA
SO Poultry Science, (1996) Vol. 75, No. 11, pp. 1365-1372. ISSN: 0032-5791.
DT Article
LA English

L9 ANSWER 62 OF 96 CAPLUS COPYRIGHT 2003 ACS
AN 1997:189247 CAPLUS
DN 126:250291
TI Microbiological hazards for humans of antimicrobial growth promoter use in animal production
AU Corpet, D.E.
CS Ecole Nationale Veterinaire, INRA, Departement Elevage and Produits, Toulouse, F-31076, Fr.
SO Revue de Medecine Veterinaire (Toulouse) (1996), 147(12), 851-862 CODEN: RVMVAH; ISSN: 0035-1555
PB Ecole Nationale Veterinaire de Toulouse
DT Journal; General Review
LA English

L9 ANSWER 63 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1997:195776 BIOSIS
DN PREV199799494979
TI Studies of safety, immunogenicity and reactogenicity of a new live oral temperature sensitive (TS) vaccine 51-1 of **Salmonella** typhi.
AU Bellanti, J. A.; Zeligs, B.; Cotronei, C.; Mendez, J.; Sofat, N.
CS G.U. Sch. Med., Washington, DC USA
SO Abstracts of the Interscience Conference on Antimicrobial Agents and Chemotherapy, (1996) Vol. 36, No. 0, pp. 153.
Meeting Info.: 36th ICAAC (International Conference of Antimicrobial Agents and Chemotherapy) New Orleans, Louisiana, USA September 15-18, 1996
DT Conference; Abstract; Conference
LA English

L9 ANSWER 64 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1996:86990 BIOSIS
DN PREV199698659125
TI **Fecal shedding** of **Salmonella** in exotic felids.
AU Clyde, Victoria L.; Ramsay, Ed; Bemis, David
CS Dep. Comparative Med., Univ. Tenn., Knoxville, TN 37901-1071 USA
SO Junge, R. E. [Editor]. (1995) pp. 449. Proceedings of a Joint Conference American Association of Zoo Veterinarians, Wildlife Disease Association, and American Association of Wildlife Veterinarians.
Publisher: AAZV, AAWV, and WDA 810 East 10th Street, Lawrence, Kansas

66044, USA.
Meeting Info.: Proceedings of a Joint Conference American Association of Zoo Veterinarians, Wildlife Disease Association, and American Association of Wildlife Veterinarians East Lansing, Michigan, USA August 12-17, 1995
DT Conference
LA English

L9 ANSWER 65 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1995:290611 BIOSIS
DN PREV199598304911
TI Effect of dose on persistence of **Salmonella** choleraesuis infection in swine.
AU Gray, J. T.; Stabel, T. J.; Fedorka-Cray, P. J.
CS USDA-ARS-National Anim. Dis. Cent., Ames, IA 50010 USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (1995) Vol. 95, No. 0, pp. 225.
Meeting Info.: 95th General Meeting of the American Society for Microbiology Washington, D.C., USA May 21-25, 1995
ISSN: 1060-2011.
DT Conference
LA English

L9 ANSWER 66 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 47
AN 1995:108406 BIOSIS
DN PREV199598122706
TI Safety, efficacy, and duration of immunity induced in swine by use of an avirulent live **Salmonella** choleraesuis-containing vaccine.
AU Roof, Michael B.; Doitchinoff, D. Dean
CS NOBL Lab. Inc., Sioux Cent., IA USA
SO American Journal of Veterinary Research, (1995) Vol. 56, No. 1, pp. 39-44.
ISSN: 0002-9645.
DT Article
LA English

L9 ANSWER 67 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1995:423312 BIOSIS
DN PREV199598437612
TI Applying tests for specific egg yolk antibodies to predict the production of eggs contaminated with **Salmonella** enteritidis by experimentally infected laying hens.
AU Gast, Richard K. (1); Porter., Robert E., Jr.; Holt, Pete S. (1)
CS (1) USDA-ARS, Southeast Poult. Res. Lab., Athens, GA 30605 USA
SO Poultry Science, (1995) Vol. 74, No. SUPPL. 1, pp. 23.
Meeting Info.: Eighty-fourth Annual Meeting of the Poultry Science Association, Inc. Edmonton, Alberta, Canada August 14-18, 1995
ISSN: 0032-5791.
DT Conference
LA English

L9 ANSWER 68 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 48
AN 1994:272711 BIOSIS
DN PREV199497285711
TI Virulent **Salmonella** typhimurium-induced lymphocyte depletion and immunosuppression in chickens.
AU Hassan, Jubril Olu; Curtiss, Roy, III (1)
CS (1) Dep. Biol., Campus Box 1137, Washington Univ., St. Louis, MO 63130 USA
SO Infection and Immunity, (1994) Vol. 62, No. 5, pp. 2027-2036.
ISSN: 0019-9567.
DT Article
LA English

L9 ANSWER 69 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 49
AN 1994:302377 BIOSIS
DN PREV199497315377
TI Evaluation of resistance of four strains of commercial laying hens to experimental infection with **Salmonella** enteritidis phage type eight.
AU Lindell, K. A.; Saeed, A. M. (1); McCabe, G. P.
CS (1) Dep. Vet. Pathobiol., Sch. Vet. Med., Purdue Univ., West Lafayette, IN 47907 USA
SO Poultry Science, (1994) Vol. 73, No. 6, pp. 757-762.
ISSN: 0032-5791.
DT Article
LA English

L9 ANSWER 70 OF 96 LIFESCI COPYRIGHT 2003 CSA
AN 95:89992 LIFESCI
TI The influence of dietary sodium ethylene diamine tetra acetic acid (EDTA) on **Salmonella** colonization in chicken
AU Javed, T.; Hameed, A.; Siddique, M.
CS Dep. Biol. Sci., Quaid-i-Azam Univ., Islamabad, Pakistan
SO PROC. PAK. CONGR. ZOOL., (1994) pp. 513-521. ZOOLOGICAL SOCIETY OF PAKISTAN. LAHORE (PAKISTAN).
Meeting Info.: 13. Pakistan Congress of Zoology. Islamabad (Pakistan). 31 Mar-1 Apr 1993.
DT Book
TC Conference
FS J
LA English
SL English

L9 ANSWER 71 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 50
AN 1994:175983 BIOSIS
DN PREV199497188983
TI Prevalence of **fecal Salmonella shedding** by cull dairy cattle marketed in Washington state.
AU Gay, John M. (1); Rice, Daniel H.; Steiger, Jacob H.
CS (1) Field Disease Investigation Unit, Dep. Veterinary Clinical Medicine and Surgery, Washington State University, Pullman, WA 99164-6610 USA
SO Journal of Food Protection, (1994) Vol. 57, No. 3, pp. 195-197.
ISSN: 0362-028X.
DT Article
LA English

L9 ANSWER 72 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 51
AN 1994:110174 BIOSIS
DN PREV199497123174
TI Evaluation of the efficacy of oil-emulsion bacterins for reducing **fecal shedding** of **Salmonella** enteritidis by laying hens.
AU Gast, Richard K.; Stone, Henry D.; Holt, Peter S.
CS U.S. Dep. Agric., Agric. Res. Serv., Southeast Poultry Res. Lab., 934 College Station Road, Athens, GA 30605 USA
SO Avian Diseases, (1993) Vol. 37, No. 4, pp. 1085-1091.
ISSN: 0005-2086.
DT Article
LA English
SL English; Spanish

L9 ANSWER 73 OF 96 MEDLINE
AN 94167725 MEDLINE

DN 94167725 PubMed ID: 8122236
TI [The control of bovine salmonellosis under field conditions using herd-specific vaccines].
Erfahrungen zur Bekampfung der Rindersalmonellose unter Praxisbedingungen mittels Anwendung stallspezifischer Vakzinen.
AU Weber A; Bernt C; Bauer K; Mayr A
CS Landesuntersuchungsamt fur das Gesundheitswesen Nordbayern, Nurnberg.
SO TIERARZTLICHE PRAXIS, (1993 Dec) 21 (6) 511-6.
Journal code: 7501042. ISSN: 0303-6286.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 199404
ED Entered STN: 19940412
Last Updated on STN: 19970203
Entered Medline: 19940407

L9 ANSWER 74 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 52
AN 1993:252120 BIOSIS
DN PREV199395131295
TI Effect of infective dose on humoral immune responses and colonization in chickens experimentally infected with **Salmonella** typhimurium.
AU Hassan, Jubril Olu; Porter, Susan B.; Curtiss, Roy, III (1)
CS (1) Dep. Biol., Washington University, St. Louis, MO 63130 USA
SO Avian Diseases, (1993) Vol. 37, No. 1, pp. 19-26.
ISSN: 0005-2086.
DT Article
LA English
SL English; Spanish

L9 ANSWER 75 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1993:5565 BIOSIS
DN PREV199395005565
TI **Salmonella** infections in neonatal dairy calves.
AU Lance, Susan E. (1); Miller, Gay Y. (1); Hancock, Dale D.; Bartlett, Paul C.; Heider, Lawrence E. (1)
CS (1) Dep. Veterinary Preventive Med., Coll. Veterinary Med., Ohio State Univ., 1990 Coffey Road, Columbus, Ohio 43210-1092
SO Journal of the American Veterinary Medical Association, (1992) Vol. 201, No. 6, pp. 864-868.
ISSN: 0003-1488.
DT Article
LA English

L9 ANSWER 76 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1993:52536 BIOSIS
DN PREV199395028838
TI The role of mice in the epizootiology of **Salmonella** enteritidis infection on chicken layer farms.
AU Henzler, D. J.; Opitz, H. M. (1)
CS (1) Cooperative Extension, Univ. Maine, Orono, Maine 04469
SO Avian Diseases, (1992) Vol. 36, No. 3, pp. 625-631.
ISSN: 0005-2086.
DT Article
LA English
SL English; Spanish

L9 ANSWER 77 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1992:400268 BIOSIS
DN BR43:56143
TI SALMONELLOSIS IN BEEF CATTLE.

AU WOOLLEN N E; DANIELS E K; LITTLEDIKE E T
CS USDA, ARS, U. S. MEAT ANIMAL RES. CENTER, CLAY CENTER, NEBR.
SO 92ND GENERAL MEETING OF THE AMERICAN SOCIETY FOR MICROBIOLOGY, NEW ORLEANS, LOUISIANA, USA, MAY 26-30, 1992. ABSTR GEN MEET AM SOC MICROBIOL. (1992) 92 (0), 395.
CODEN: AGMME8.
DT Conference
FS BR; OLD
LA English

L9 ANSWER 78 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 53
AN 1992:27964 BIOSIS
DN BA93:17239
TI RESISTANCE TO **FECAL SHEDDING** OF SALMONELLAE IN PIGS AND CHICKENS VACCINATED WITH AN AROMATIC-DEPENDENT MUTANT OF **SALMONELLA**-TYPHIMURIUM.
AU LUMSDEN J S; WILKIE B N; CLARKE R C
CS DEP. VETERINARY MICROBIOLOGY IMMUNOLOGY, ONTARIO VETERINARY COLLEGE, UNIVERSITY GUELPH, GUELPH, ONTARIO, CAN. N1G 2W1.
SO AM J VET RES, (1991) 52 (11), 1784-1787.
CODEN: AJVRAH. ISSN: 0002-9645.
FS BA; OLD
LA English

L9 ANSWER 79 OF 96 MEDLINE DUPLICATE 54
AN 91178617 MEDLINE
DN 91178617 PubMed ID: 2007952
TI Therapy for acute infectious diarrhea in children.
AU Pickering L K
CS Department of Pediatrics, University of Texas Medical School, Houston 77030.
NC AI-27551 (NIAID)
HD-13021 (NICHD)
HR-96040 (NHLBI)
SO JOURNAL OF PEDIATRICS, (1991 Apr) 118 (4 (Pt 2)) S118-28. Ref: 101
Journal code: 0375410. ISSN: 0022-3476.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LA English
FS Abridged Index Medicus Journals; Priority Journals; AIDS
EM 199105
ED Entered STN: 19910519
Last Updated on STN: 19910519
Entered Medline: 19910502

L9 ANSWER 80 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 55
AN 1990:332840 BIOSIS
DN BA90:40859
TI EPIDEMIOLOGIC STUDY OF SALMONELLAE SHEDDING IN THE FECES OF HORSES AND POTENTIAL RISK FACTORS FOR DEVELOPMENT OF THE INFECTION IN HOSPITALIZED HORSES.
AU TRAUB-DARGATZ J L; SALMAN M D; JONES R L
CS DEP. CLINICAL SCI., COLL. OF VETERINARY MED. AND BIOMED. SCI., COLO. STATE UNIV., FORT COLLINS, COLO. 80523.
SO J AM VET MED ASSOC, (1990) 196 (10), 1617-1622.
CODEN: JAVMA4. ISSN: 0003-1488.
FS BA; OLD
LA English

L9 ANSWER 81 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 56
AN 1990:495325 BIOSIS
DN BA90:123671
TI PATHOGENESIS OF **SALMONELLA**-ENTERITIDIS INFECTION IN LAYING CHICKENS I. STUDIES ON EGG TRANSMISSION CLINICAL SIGNS **FECAL SHEDDING** AND SEROLOGIC RESPONSES.
AU SHIVAPRASAD H L; TIMONEY J F; MORALES S; LUCIO B; BAKER R C
CS CALIFORNIA VETERINARY DIAGNOSTIC LAB. SYSTEM, UNIVERSITY CALIFORNIA DAVIS, FRESNO BRANCH, 2789 SOUTH ORANGE AVENUE, FRESNO, CALIF. 93725.
SO AVIAN DIS, (1990) 34 (3), 548-557.
CODEN: AVDIAI. ISSN: 0005-2086.
FS BA; OLD
LA English

L9 ANSWER 82 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 57
AN 1989:427172 BIOSIS
DN BA88:85430
TI DETECTION OF **SALMONELLA**-DUBLIN MAMMARY GLAND INFECTION IN CARRIER COWS USING AN ELISA FOR ANTIBODY IN MILK OR SERUM.
AU SMITH B P; OLIVER D G; SINGH P; DILLING G; MARVIN P A; RAM B P; JANG L S; SHARKOV N; ORSBORN J S; ET AL
CS DEP. MED. SCH. VET. MED., UNIV. CALIFORNIA, DAVIS, CALIF. 95616, USA.
SO AM J VET RES, (1989) 50 (8), 1352-1360.
CODEN: AJVRAH. ISSN: 0002-9645.
FS BA; OLD
LA English

L9 ANSWER 83 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 58
AN 1989:248127 BIOSIS
DN BA87:129192
TI PREVALENCE OF CRYPTOSPORIDIUM-SP IN EQUIDS IN LOUISIANA USA.
AU COLEMAN S U; KLEI T R; FRENCH D D; CHAPMAN M R; CORSTVET R E
CS DEP. VET. MICROBIOL. PARASITOL., SCH. VET. MED., LA. STATE UNIV., LA., USA.
SO AM J VET RES, (1989) 50 (4), 575-577.
CODEN: AJVRAH. ISSN: 0002-9645.
FS BA; OLD
LA English

L9 ANSWER 84 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 59
AN 1987:380380 BIOSIS
DN BA84:66877
TI CONJUNCTIVAL AND INTRAMUSCULAR VACCINATION OF PIGS WITH A LIVE AVIRULENT STRAIN OF **SALMONELLA**-CHOLERAE-SUIS.
AU KRAMER T T; PARDON P; MARLY J; BERNARD S
CS DEP. VET. MICROBIOL. PREVENTIVE MED., IOWA STATE UNIV., AMES, IOWA 500011.
SO AM J VET RES, (1987) 48 (7), 1072-1076.
CODEN: AJVRAH. ISSN: 0002-9645.
FS BA; OLD
LA English

L9 ANSWER 85 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 60
AN 1987:106617 BIOSIS
DN BA83:55595
TI AN EPIDEMIOLOGICAL STUDY OF SELECTED CALF PATHOGENS ON HOLSTEIN DAIRY FARMS IN SOUTHWESTERN ONTARIO CANADA.
AU WALTNER-TOEWS D; MARTIN S W; MEEK A H
CS C/O YOGYAKARTA DISEASE INVESTIGATION CENT., B.P.P.H. WIL. IV, P.O. BOX 79,

YOGYAKARTA, INDONESIA.
SO CAN J VET RES, (1986) 50 (3), 307-313.
CODEN: CJVRE9. ISSN: 0830-9000.
FS BA; OLD
LA English

L9 ANSWER 86 OF 96 CABA COPYRIGHT 2003 CABI
AN 85:77992 CABA
DN 852263054
TI The effect of oxytetracycline on the **fecal shedding** of **Salmonella** typhimurium in chickens
AU Huber, W. G.
SO (1984) pp. 23. Abstract No.128.Chicago, Illinois
Meeting Info.: Abstracts of papers presented at the 65th Annual Meeting of the Conference of Research Workers in Animal Disease, 12-13 November 1984.
CY United States
DT Miscellaneous
LA English

L9 ANSWER 87 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1985:239657 BIOSIS
DN BA79:19653
TI EFFECT OF FEEDING ENRAMYCIN ON SHEDDING OF **SALMONELLA** -TYPHIMURIUM BY EXPERIMENTALLY INFECTED BROILER CHICKENS.
AU YAMAZAKI T; MORISHIMA K; MATSUBARA Y; SUENAGA I
CS ANIMAL HEALTH PRODUCTS DIV., TAKEDA CHEM. INDUSTRIES, LTD., 17-85, JUSOHONMACHI 2-CHOME, YODOGAWA-KU, OSAKA 532, JAPAN.
SO J TAKEDA RES LAB, (1984) 43 (1-2), 45-52.
CODEN: TAKHAA. ISSN: 0371-5167.
FS BA; OLD
LA English

L9 ANSWER 88 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1983:223197 BIOSIS
DN BA75:73197
TI RECOVERY AND PATHOGENICITY OF SEVERAL **SALMONELLA** SPECIES ISOLATED FROM MICE.
AU KIRCHNER B K; DIXON L W; LENTSCH R H; WAGNER J E
CS RES. ANIM. DIAGN. INVEST. LAB., VET. MED. DIAGN. LAB., COLL. VET. MED., UNIV. MO., COLUMBIA, MO 65211.
SO LAB ANIM SCI, (1982) 32 (5), 506-508.
CODEN: LBASAE. ISSN: 0023-6764.
FS BA; OLD
LA English

L9 ANSWER 89 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 61
AN 1982:221268 BIOSIS
DN BA73:81252
TI USE OF DUCKS AS A MODEL TO STUDY THE EFFECT OF ANTIBIOTICS IN FEED ON THE **FECAL SHEDDING** OF **SALMONELLA**.
AU LATOUR B; BARNUM D A
CS DEP. VET. MICROBIOL. IMMUNOL., ONTARIO VET. COLL., GUELPH, ONTARIO, CAN., N1G 2W1.
SO AM J VET RES, (1981 (RECD 1982)) 42 (12), 2105-2108.
CODEN: AJVRAH. ISSN: 0002-9645.
FS BA; OLD
LA English

L9 ANSWER 90 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 62
AN 1980:247900 BIOSIS
DN BA70:40396

TI SALMONELLAE RECOVERY FOLLOWING ORAL AND INTRA VENOUS INOCULATION OF LAYING HENS.
AU BAKER R C; GOFF J P; MULNIX E J
CS DEP. POULT. SCI., CORNELL UNIV., ITHACA, N.Y. 14853, USA.
SO POULT SCI, (1980) 59 (5), 1067-1072.
CODEN: POSCAL. ISSN: 0032-5791.
FS BA; OLD
LA English

L9 ANSWER 91 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1980:142513 BIOSIS
DN BA69:17509
TI EQUINE SALMONELLOSIS EXPERIMENTAL PRODUCTION OF 4 SYNDROMES.
AU SMITH B P; HARDY A J; HABASHA F; REINA-GUERRA M
CS DEP. MED., SCH. VET. MED., UNIV. CALIF., DAVIS, CALIF. 95616, USA.
SO AM J VET RES, (1979) 40 (8), 1072-1077.
CODEN: AJVRAH. ISSN: 0002-9645.
FS BA; OLD
LA English

L9 ANSWER 92 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 63
AN 1979:191815 BIOSIS
DN BA67:71815
TI EFFECT OF FEEDING CHLORTETRACYCLINE ON THE RESERVOIR OF **SALMONELLA** -TYPHIMURIUM IN EXPERIMENTALLY INFECTED SWINE.
AU WILLIAMS R D; ROLLINS L D; POCURULL D W; SELWYN M; MERCER H D
CS DIV. VET. MED. RES., BUR. VET. MED., FOOD DRUG ADM., BELTSVILLE, MD. 20705, USA.
SO ANTIMICROB AGENTS CHEMOTHER, (1978) 14 (5), 710-719.
CODEN: AMACCQ. ISSN: 0066-4804.
FS BA; OLD
LA English

L9 ANSWER 93 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 64
AN 1979:193565 BIOSIS
DN BA67:73565
TI EFFECTS OF GALACTOSE EPIMERASE MUTANT OF **SALMONELLA**-TYPHIMURIUM ON EXPERIMENTAL SALMONELLOSIS IN CHICKENS.
AU PRITCHARD D G; NIVAS S C; YORK M D; POMEROY B S
CS CENT. VET. LAB., MINIST. AGRIC. FISH. FOOD., NEW HAW KT15 3NB, SURREY, ENGL., UK.
SO AVIAN DIS, (1978) 22 (4), 562-575.
CODEN: AVDIAI. ISSN: 0005-2086.
FS BA; OLD
LA English

L9 ANSWER 94 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 65
AN 1979:263309 BIOSIS
DN BA68:65813
TI INFLUENCE OF CHLORTETRACYCLINE FEEDING OF SALMONELLOSIS IN CALVES PART 1 RATE AND DURATION OF SHEDDING PART 2 SEVERITY OF ILLNESS.
AU DEY B P; BLENDEN D C; BURTON G C; MERCER H D; TSUTAKAWA R K
CS ANTIBIOT. SECT., NATL. RESIDUE LAB., NORTH RES. CENT., 1815 N. UNIVERSITY ST., PEORIA, ILL. 61604, USA.
SO INT J ZOONOSES, (1978 (RECD 1979)) 5 (2), 97-110.
CODEN: IJZODH. ISSN: 0377-0168.
FS BA; OLD
LA English

L9 ANSWER 95 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AN 1978:136875 BIOSIS
DN BA65:23875
TI EPIDEMIOLOGIC IMPORTANCE OF THE ISOLATION OF **SALMONELLA** FROM DOGS.
AU BOOS G
CS VET. UNTERSUCHUNGSSTELLE BUNDESWEHR IV, FREILIGRATHSTR. 6, D-6500 MAINZ, W. GER.
SO ZENTRALBL BAKTERIOL PARASITENKD INFEKTIONSKR HYG ERSTE ABT ORIG REIHE B HYG BETRIEBSHYG PRAEV MED, (1977) 164 (4), 368-380.
CODEN: ZHPMAT. ISSN: 0300-9661.
FS BA; OLD
LA German

L9 ANSWER 96 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1976:211652 BIOSIS
DN BA62:41652
TI INFLUENCE OF BAMBERMYCINS ON **SALMONELLA** INFECTION AND ANTIBIOTIC RESISTANCE IN SWINE.
AU DEALY J; MOELLER M W
SO J ANIM SCI, (1976) 42 (5), 1331-1336.
CODEN: JANSAG. ISSN: 0021-8812.
FS BA; OLD
LA Unavailable

=> d ab l9 1-96

L9 ANSWER 1 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
AB The shdA gene is carried on a 25-kb genetic island at centisome 54 (CS54 island) of the **Salmonella** enterica serotype typhimurium chromosome. In addition to shdA, the CS54 island of **Salmonella** serotype typhimurium strain LT2 contains four open reading frames designated ratA, ratB, sivI, and sivH. DNA hybridization analysis revealed that the CS54 island is comprised of two regions with distinct phylogenetic distribution within the genus **Salmonella**. Homologues of shdA and ratB were detected only in serotypes of **Salmonella** enterica subsp. I. In contrast, sequences hybridizing with ratA, sivI, and sivH were present in S. enterica subsp. II and S. bongori in addition to S. enterica subsp. I. Deletion of the ratA and sivI genes did not alter the ability of **Salmonella** serotype typhimurium to colonize the organs of mice. Insertional inactivation of the sivH gene resulted in defective colonization of the Peyer's patches of the terminal ileum but normal colonization of the cecum, mesenteric lymph nodes, and spleen. Deletion of the shdA gene resulted in decreased colonization of the cecum and Peyer's patches of the terminal ileum and colonization to a lesser degree in the mesenteric lymph nodes and spleen 5 days post-oral inoculation of mice. A strain containing a deletion in the ratB gene exhibited a defect for the colonization of the cecum but not of the Peyer's patches, mesenteric lymph nodes, and spleen. The shdA and ratB deletion strains exhibited a shedding defect in mice, whereas the sivH deletion strain was shed at numbers similar to the wild type. These data suggest that colonization of the murine cecum is required for efficient **fecal shedding** in mice.

L9 ANSWER 2 OF 96 MEDLINE DUPLICATE 2
AB Escherichia coli O157:H7 and **Salmonella** are widely recognized as important agents of foodborne disease with worldwide distribution. The use of ionophores in feeding growing ruminants is widespread in the United States and has attracted recent interest due to the apparent temporal relationship between initial ionophore use and the increase in human E. coli O157:H7 cases. Two experiments were conducted to evaluate the effects of short-term feeding of ionophores on **fecal**

shedding, intestinal concentrations, and antimicrobial susceptibility of E. coli O157:H7 and S. typhimurium in growing lambs. Sixteen lambs were used in each experiment, four lambs per treatment group: monensin, laidlomycin propionate, bambermycin, and a control treatment. Lambs were fed a grain and hay (50:50) diet with their respective ionophore for 12 d before experimental inoculation with E. coli O157:H7 or S. typhimurium. Animals were maintained on their respective diets an additional 12 d, and **fecal shedding** of inoculated pathogens was monitored daily. Lambs were killed and tissues and contents were sampled from the rumen, cecum, and rectum. No differences ($P > 0.05$) in **fecal shedding** of **Salmonella** or E. coli O157:H7 were observed due to treatment. Occurrence of **Salmonella** or E. coli in luminal contents and tissue samples from the rumen, cecum, and rectum did not differ ($P > 0.05$) among treatments. Feeding monensin decreased ($P < 0.05$) the incidence of scours in sheep infected with **Salmonella** compared with the other treatments. No differences in antimicrobial susceptibility were found in any of **Salmonella** or E. coli O157:H7 isolates. Results from these studies indicate that short-term ionophore feeding had very limited effects on E. coli and **Salmonella** shedding or on antimicrobial susceptibility in experimentally infected lambs.

L9 ANSWER 3 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 3

AB The association of herd- and sample-level factors with the isolation of **Salmonella** group B from cattle fecal samples was analyzed. Study farms were 65 dairy herds with a recent history of laboratory-confirmed clinical **salmonella** infections. Herds were visited once per month for three months to collect data and samples for bacteriological culture. Herd size varied widely from 34 to 3700 total cattle on the farm (median = 370). **Salmonella** serogroup B was isolated from 270 of 2726 samples tested. The predominant serotypes identified were S. Typhimurium and S. Typhimurium var. Copenhagen. Logistic regression was used to analyze the relationship between potential risk factors and isolating **Salmonella** serogroup B. The only herd-level factor which was significantly associated with **fecal shedding** was total herd size (hundreds of cattle OR = 1.09; 95% confidence interval (CI): 1.05, 1.14). The probability of a positive sample decreased substantially for longer intervals between the initial clinical case and sampling (interval in months OR = 0.5; 95% CI: 0.3, 0.6). The presence of diarrhea increased the risk of shedding (OR = 2.1; 95% CI: 1.4, 3.0). The effect of recent treatment with antimicrobial agents depended on age group. For heifers and cows, recent antimicrobial treatment increased the probability of isolating **Salmonella** (heifers OR = 11.8; 95% CI: 2.9, 48.8; cows OR = 4.1; 95% CI: 2.0, 8.4), but this effect was not statistically significant for calves before weaning. Among animals without recent antimicrobial treatment, preweaned calves were more likely to have positive samples than cows (OR = 3.5; 95% CI: 1.8, 6.9; heifers OR = 4.7; 95% CI: 2.3, 9.6).

L9 ANSWER 4 OF 96 WPIDS (C) 2003 THOMSON DERWENT DUPLICATE 4

AB WO 200253180 A UPAB: 20020916

NOVELTY - A composition (I) comprising at least two siderophore receptor polypeptides (SRPs) isolated from a gram negative microbe (II), at least two porins isolated from (II), and lipopolysaccharide (LPS) at a concentration not greater than about 10.0 endotoxin unit/ml (EU/ml), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) inducing (M1) the production of antibody in an animal, by administering a composition comprising at least four SRPs isolated from a gram positive microbe and a pharmaceutically acceptable carrier to the animal; and

(2) isolating (M2) outer membrane polypeptides, by providing (II),

disrupting (II) in a buffer, solubilizing the disrupted (II), and isolating molecules of (II), where the isolated molecules comprise outer membrane polypeptides comprising at least two SRPs and at least two porins, and LPS at a concentration not greater than about 10.0 EU/ml.

ACTIVITY - Antiinflammatory; Antimicrobial.

MECHANISM OF ACTION - Vaccine.

The efficacy of a **Salmonella** dublin vaccine consisting of Siderophore receptor proteins (SRPs) and porins was carried out against a live virulent challenge in mice. Sixty female CF-1 mice weighing 16-22 g were equally distributed into 6 polycarbonate mouse cages designated as groups 1-6. The composition including siderophore receptor proteins and porins was prepared as a protein suspension (77.5 ml) emulsified to give a final dose of 125 mu g total protein in a 0.25 ml injectable volume at a 22.5% v/v adjuvant concentration. The mouse dose was adjusted to a field dose of 1 mg/2 ml. Potency of the vaccine was tested at four different concentrations: non-diluted (Group 1), 1:10 (Group 2), 1:100 (Group 3) and 1:1000 (Group 4) compared to two control groups, a non vaccinated challenged group (Group 5) and a non-vaccinated challenge group (Group 6). Mice were vaccinated intraperitoneally and revaccinated 14 days after first vaccination with 0.25 cc. Fourteen days after the second vaccination, mice in groups 1-5 were intraperitoneally challenged with 1.7 multiply 108 colony forming units (CFU) of a virulent S.dublin isolate. Mortality was recorded daily for 2 weeks post-challenge. Ten (100%) of the non-vaccinated mice (Group 5) died within 14 days after challenge. In contrast, none of the mice died given the non-diluted vaccine of group 1. All dilutions of the test vaccine showed a high degree of protection as compared to the non-vaccinated/challenged mice of Group 5. None of the mice died in group 6 showing no horizontal transmission of the organism between the groups.

USE - (I) is useful for inducing the production of antibody in an animal e.g. avian, bovine, caprine, porcine or ovine, for treating an animal for a high somatic cell count, for reducing **fecal shedding** of a microbe in an animal's intestinal tract, for treating an animal for low milk production, and for treating mastitis and metritis in a milk producing animal (claimed). (I) is useful for treating a condition associated with a microbial infection.

Dwg.0/10

L9 ANSWER 5 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5

AB Brewers dried yeast, a source of mannan oligosaccharides (MOS), was assessed as an alternative to an antimicrobial agent (carbadox) for young pigs in two experiments. The yeast contained 5.2% MOS. Agglutination tests confirmed adsorption of several serovars of E. coli and **Salmonella** spp. onto the yeast product. In Exp. 1, seven replicates (five pigs per pen) of 22-d-old pigs were fed a nonmedicated basal diet or the basal diet with carbadox (55 mg/kg), yeast (3%), or a combination of 3% yeast and 2% citric acid for 28 d. Carbadox did not improve growth performance. Growth rate and feed intake were depressed ($P < 0.05$) in pigs fed yeast alone or in combination with acid. Log counts of total coliforms, Escherichia coli, and Clostridium perfringens in feces were not affected by diet, but Bifidobacteria spp. counts were lower ($P < 0.05$) in pigs fed the yeast + acid diet and lactobacilli counts were higher ($P < 0.05$) in pigs fed yeast. Fecal pH and VFA concentrations and intestinal morphological traits were not consistently affected by diet. Serum IgG levels were elevated in the yeast + acid ($P < 0.01$) group. In Exp. 2, the effects of yeast and carbadox additions to the diet on enteric microbial populations in young pigs housed in isolation units were evaluated. Pigs ($n = 24$) were weaned at 11 d of age (4.1 kg BW) and placed in isolation chambers (two pigs per chamber) equipped with individual air filtering systems and excrement containers. Treatments were a nonmedicated basal diet and the basal diet with 55 mg/kg of carbadox or with 3% yeast. Diets were fed for 29 d, then each pig was orally dosed with approximately 9.5 X 108 CFU of E. coli K88.

Daily fecal E. coli K88 counts were not different (P > 0.05) among treatments, but **fecal shedding** of carbadox-resistant coliforms was higher (P < 0.01) during the 9-d period in pigs fed carbadox. Total fecal coliforms were consistently lower throughout the postinoculation period in pigs fed yeast (P < 0.05). Yeast reduced colonization of total coliforms in the duodenum, jejunum, cecum, and colon, but it did not have a consistent effect on colonization of E. coli K88. Pigs fed yeast tended (P < 0.10) to have higher serum IgG levels than controls. In these experiments, brewers dried yeast and carbadox had minimal effects on growth, microbial populations, and intestinal health traits of early-weaned pigs, but certain serum immunological traits were enhanced by feeding yeast.

L9 ANSWER 6 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 6

AB The objective of this study was to evaluate the effect of typical production practices during the transport of cattle on the resulting incidence of **Salmonella** and Campylobacter in the feces, on the hides, and on the carcasses of these cattle and in the environment (trucks, holding pens, and knock boxes). Various factors were evaluated, including the type of animal (feedlot cattle vs. adult pasture cattle), the breed of cattle, the body condition of the animal, the age of the animal, the time of feed and water withdrawal, the contamination level of the transport vehicle at the feedlot or farm, the transport time, the time cattle were held in the holding pen at the plant, and the contamination level of the holding pen. Four groups of each type of animal were sampled on different days. Samples were collected from cattle prior to transport and after transport (rectal and hide swabs) as well as from the carcasses of these cattle. Pre- and posttransit samples were also taken from the transport vehicle and from the holding pen and knock box at the slaughter facility. For feedlot cattle, **fecal shedding** stayed fairly constant for both organisms before and after transport (3 to 5% for **Salmonella** and 64 to 68% for Campylobacter). However, the shedding rate for adult cattle increased from 1 to 21% for **Salmonella** but stayed constant for Campylobacter (6 to 7%). Contamination of hides with **Salmonella** increased for both animal types from a level of 18 to 20% to a level 50 to 56%. For Campylobacter, the contamination level decreased from 25 to 13% for feedlot cattle but remained unchanged for adult animals (1 to 2%). Nineteen percent of feedlot cattle carcasses and 54% of adult cattle carcasses tested positive for **Salmonella**, while only 2% of feedlot cattle carcasses and none of the adult cattle carcasses tested positive for Campylobacter. Thus, for feedlot cattle, the factors considered in this study did not affect the shedding of either organism but did affect the contamination of hides with both. For adult animals, the factors increased both shedding of and hide contamination with **Salmonella** only, not Campylobacter.

L9 ANSWER 7 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 7

AB Objective: To monitor patterns of **Salmonella fecal shedding** in naturally infected dairy herds, determine the association between **fecal shedding** and individual animal production measures, and evaluate potential risk factors for shedding of **Salmonella** organisms among cattle in dairy herds. Design: Longitudinal study. Sample Population: 5 Ohio dairy herds. Procedure: For 3 herds, fecal samples were collected from all mature cows and unweaned calves 7 times during an 18-month period. For the remaining 2 herds, fecal samples were collected from 50 lactating cows 6 times during a 12-month period. Individual animal production records for 3 herds were used to examine associations between individual **fecal Salmonella shedding** status and 305-day mature-equivalent milk production, somatic cell count, milk fat content, and milk protein content. Multivariable logistic regression was used to test for

associations between **fecal shedding** status and breed, lactation status, lactation number, and duration of lactation. Results: None of the adult animals had clinical signs of salmonellosis, but prevalence of **fecal Salmonella shedding** at individual collection times ranged from 0 to 99% for cows and from 0 to 67% for unweaned calves. Mature cows were more likely to be shedding **Salmonella** organisms than were unweaned calves. Within herds, lactation status and duration of lactation for individual animals were associated with **Salmonella shedding** status. **Salmonella fecal shedding** status was not associated with individual cow production measures. Conclusions and Clinical Relevance: Results suggest that subclinical **fecal Salmonella shedding** can persist in dairy herds for up to 18 months with no measurable effects on health or production of individual cows.

L9 ANSWER 8 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 8

AB Objective: To estimate prevalence of **Salmonella** spp in Ohio dairy farms and to identify potential risk factors for **fecal shedding** of salmonellae. Design: Cross-sectional study. Sample Population: 105 Ohio dairy farms. Procedure: Individual fecal samples from all mature cows in study herds were tested for **Salmonella** spp by use of standard bacteriologic culture procedures. Herds were identified as infected if at least 1 cow was shedding **Salmonella** spp. Information regarding herd characteristics, management practices, and health history were collected. Potential risk factors for herd-level **Salmonella** infection were identified. Results: In 31% of the study herds (95% confidence interval, 22 to 40%), at least 1 cow was shedding **Salmonella** spp. Six percent of 7,776 fecal samples contained **Salmonella** organisms; prevalence within infected herds ranged from <1 to 97%. Herd size, use of free stalls for lactating and nonlactating cows, and use of straw bedding in nonlactating cows were significantly associated with **fecal shedding** of **Salmonella** spp, as determined by use of univariate analysis. By use of multivariate analysis, large herds were more likely to be infected than smaller herds; however, no other factors were associated with **Salmonella** infection after adjustment for herd size. Conclusions and Clinical Relevance: Subclinical shedding of **Salmonella** spp is common in Ohio dairy herds, although we could not identify specific interventions that may influence the prevalence of **Salmonella** spp on dairy farms. It appears that large herd size and intensive management may provide an environment conducive to **Salmonella** shedding and chronic dairy herd infection.

L9 ANSWER 9 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 9

AB Experimental infection models are useful tools for understanding how **Salmonella** enteritidis is deposited in eggs and for testing potential strategies to control eggborne transmission of disease to humans. Oral inoculation of laying hens is presumed to provide the closest simulation of naturally occurring infections, but alternatives such as intravenous or aerosol inoculation have sometimes been recommended as options to induce higher incidences of egg contamination. The present study compared the frequency, level, and location of S. enteritidis deposition in egg contents after experimental inoculation by three different routes. In two replicate trials, specific-pathogen-free laying hens were infected with an S. enteritidis culture mixture prepared to optimize invasive behavior. Groups of hens received either an oral dose of 109 S. enteritidis, an aerosol dose of 109 S. enteritidis, or an intravenous dose of 105-107 S. enteritidis. Oral inoculation led to the highest incidence of **fecal shedding** of S. enteritidis, whereas intravenous inoculation produced the highest specific antibody

titers. Eggs laid during the first 21 days postinoculation were cultured to detect and enumerate S. enteritidis in the yolk and albumen. No significant differences were observed among the three inoculation routes in the frequencies of isolation of S. enteritidis from either yolk or albumen. For all three routes of administration, S. enteritidis was recovered more often from yolk (at frequencies ranging from 4% to 7%) than from albumen (0 to 2%). Over 73% of contaminated eggs harbored fewer than 1 colony-forming unit (CFU) of S. enteritidis per milliliter, and only 3% of such eggs contained more than 100 CFUs/ml. Significantly higher levels of S. enteritidis contaminants were associated with intravenous inoculation than with the other routes. No advantage of using aerosol or intravenous administration of S. enteritidis as an alternative to oral inoculation for inducing the production of contaminated eggs was evident in this study.

L9 ANSWER 10 OF 96 CABA COPYRIGHT 2003 CABI

AB The association of herd- and sample-level factors with the isolation of **Salmonella** group B from cattle faecal samples was analysed. Study farms were 65 dairy herds with a recent history of laboratory-confirmed clinical **salmonella** infections. Herds were visited once per month for three months to collect data and samples for bacteriological culture. Herd size varied widely from 34 to 3700 total cattle on the farm (median=370). **Salmonella** serogroup B was isolated from 270 of 2726 samples tested. The predominant serotypes identified were S. Typhimurium and S. Typhimurium var. Copenhagen. Logistic regression was used to analyze the relationship between potential risk factors and isolating **Salmonella** serogroup B. The only herd-level factor which was significantly associated with faecal shedding was total herd size (hundreds of cattle OR=1.09; 95% confidence interval (CI): 1.05, 1.14). The probability of a positive sample decreased substantially for longer intervals between the initial clinical case and sampling (interval in months OR=0.5; 95% CI: 0.3, 0.6). The presence of diarrhoea increased the risk of shedding (OR=2.1; 95% CI: 1.4, 3.0). The effect of recent treatment with antimicrobial agents depended on age group. For heifers and cows, recent antimicrobial treatment increased the probability of isolating **Salmonella** (heifers OR=11.8; 95% CI: 2.9, 48.8; cows OR=4.1; 95% CI: 2.0, 8.4), but this effect was not statistically significant for calves before weaning. Among animals without recent antimicrobial treatment, preweaned calves were more likely to have positive samples than cows (OR=3.5; 95% CI: 1.8, 6.9; heifers OR=4.7; 95% CI: 2.3, 9.6).

L9 ANSWER 11 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

L9 ANSWER 12 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 10

AB In a cross-sectional national study that included 972 operations with gtoreq3 horses on 1/1/98 in 28 states in the USA, 8,417 fecal specimens were collected from horses and cultured to test for the presence of **Salmonella** spp. Operations were characterized as **Salmonella** spp-positive if at least one fecal specimen tested positive for **Salmonella** spp. Percentages of **Salmonella** spp-positive operations were computed by management and other factors (collected from operation-level questionnaires) that were hypothesized to be related to **fecal shedding** of **Salmonella** spp. A logistic-regression model was constructed to identify factors associated with horses' shedding **Salmonella** spp in feces on an operation. The odds of an operation being **Salmonella** spp positive increased as the number of resident horses increased. In addition, the following factors were found to be associated with increased odds of an operation being **Salmonella** spp positive: horses were used primarily for breeding; operation cleanliness was characterized as poor by the data collector; and new resident equids had been added to the

operation without routine quarantine.

L9 ANSWER 13 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 11

AB A high prevalence of **fecal Salmonella shedding** in a collection of healthy exotic felids precipitated a change to two new commercially available feline diets. One year after initiation of the new diets, 18 fecal samples from individual felines, their exhibits, and representative samples of the diets were cultured for **Salmonella** spp. Only one culture grew a **Salmonella** sp. **Salmonella** uganda was cultured from the feces of one snow leopard (Felis uncia). Feeding a diet with minimal to no **Salmonella** contamination lowered **Salmonella** shedding rates in this collection of captive exotic felids.

L9 ANSWER 14 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

AB Recycled poultry bedding (RPB), contaminated with **salmonella**, was fed to beef calves to determine if it would increase the prevalence of detectable **salmonella fecal shedding**. Sixty Angus crossbred steer calves were placed on balanced rations containing **salmonella** contaminated recycled poultry bedding that had been properly or improperly stacked, or fed a control diet for an 84-day growing phase. After the growing phase, the calves were transported 12 hours to simulate shipping stress and then fed a single finishing diet. Fecal samples were collected from each calf and cultured for **salmonella** prior to the start of the trial, every 14 days during the growing phase, 24 hours after transport and every 28 days during the finishing phase. At the end of the finishing phase, scrapings from the ileocecal mucosa were collected at the abattoir and cultured. Dietary components and total mixed rations were sampled and cultured weekly for **salmonella**. Other than the poultry bedding at delivery, none of the dietary components or calves were culture-positive for **salmonella** at any time during the feeding periods or after transport. One calf that had been on a RPB diet during the growing phase was positive for **Salmonella** norwich at postmortem collection; however, it was not established that this was the same serotype of **salmonella** cultured from the RPB. We conclude that feeding a known **salmonella** contaminated feed source as a part of a balanced ration did not increase the prevalence of detectable **salmonella** shedding in calves over the published prevalence.

L9 ANSWER 15 OF 96 WPIDS (C) 2003 THOMSON DERWENT

AB WO 200170247 A UPAB: 20011211

NOVELTY - A vaccine composition (I) comprising an immunologically protective amount of a first attenuated, non-reverting mutant **Salmonella** bacterium in which two or more genes (G) within the SPI2 region have been inactivated, is new.

ACTIVITY - Antibacterial.

MECHANISM OF ACTION - Vaccine.

No supporting data given.

USE - (I) is useful for conferring protective immunity on a non-rodent animal, by administering (I) to the animal, such that an improvement in mortality, symptomatic diarrhea, physical condition and milk production are provided. (I) is useful for reducing the amount or duration of bacterial shedding by about 10% or more during infection in a non-rodent animal e.g. cattle, sheep, goats, horses, pigs, poultry and other birds, cats, dogs and humans. (I) is useful for delivering a polypeptide antigen to an animal (claimed).

(I) is also useful for providing benefit to veterinary and human community health.

ADVANTAGE - (I) is a safe and efficacious live vaccine, which need not be administered at a very large doses. The mutant bacteria containing inactivations in two different genes are non-reverting, or at least much

less likely to revert to a virulent state. The safety and efficacy of a live-attenuated S. dublin Delta ssaC, Delta ssaJ or Delta ssaT mutant as vaccines was determined in cattle. Live-attenuated S. dublin strains were delivered to animals, and baseline temperatures and clinical scores (mortality, physical condition, inactivation, diarrhea (**fecal** score), and **shedding** of bacteria) were recorded on Days 1-4.

The calves were orally vaccinated on Day 4 with 1 multiply 109 CFUs/calf of wild or mutant bacteria, and monitored daily for clinical symptoms for 28 days post-vaccination (Days 5-32), of which Days 29-32 were considered as baseline before challenge with wild type bacteria. The calves were then challenged with a highly virulent, heterologous wild type S.dublin, which was a field isolate obtained from a case of bovine salmonellosis, at 28 days post-vaccination (Day 32).

The calves continued to be monitored for clinical symptoms for further 14 days post-challenge (Days 33-46). Necropsy was performed on Day 46 or at death, and tissue and fecal samples were obtained for culture of the challenge organism. The data from culturing of tissue (greater than 2 g) or fecal (greater than 2 g) samples showed that there was a reduction of the challenge strain in the tissues from animals vaccinated with the SPI2 mutants compared to the naive controls, and that oral administration of each of the three mutants as a vaccine was safe and efficacious against experimentally induced salmonellosis.

Protective effects seen with the SPI2 mutants were better than those observed with Delta yca Delta crp mutants.
Dwg.0/4

L9 ANSWER 16 OF 96 CAPLUS COPYRIGHT 2003 ACS
AB Disclosed are novel live bacterial vaccines against Escherichia coli O157:H7, to treat or prevent colonization of the gastrointestinal tract of a vertebrate by the pathogen. The vaccines comprise an effective amt. of non-pathogenic bacteria naturally expressing the O157 antigen or a structural mimic thereof as a part of their lipopolysaccharide. In a preferred embodiment, the non-pathogenic bacteria are selected from bacterial strains of the genus **Salmonella** or Citrobacter. The vaccines of the invention are particularly useful in maintaining cattle herds free of E. coli O157:H7 and in reducing carriage and **fecal shedding** of E. coli O157:H7 prior to slaughter, thus potentially reducing the clin. incidence of E. coli O157:H7 infections in humans.

L9 ANSWER 17 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 12
AB Objective: To compare the efficacy of a **Salmonella** bacterin and a modified live **Salmonella** ser. Choleraesuis vaccine on a commercial dairy. Animals: 450 cows in late gestation and 80 calves. Procedure: Group-1 cows (n=150) were vaccinated once with a modified live S Choleraesuis (serogroup C1) strain 54 (SC54) vaccine, group-2 cows (150) were vaccinated on enrollment and 30 days later with a **Salmonella** ser. Montevideo (serogroup C1) bacterin, and group-3 cows (150) served as unvaccinated controls. One gallon of colostrum harvested from the first 80 cows to calve was fed to each calf. Outcome assessments included **fecal shedding** of **Salmonella** spp for the first 10 days after parturition (cows) or birth (calves), milk production, involuntary culling rate, mastitis incidence, antimicrobial use, and mortality rate. Results: Salmonellae were isolated from 306 of 309 (99%) cows and 64 of 74 (86.5%) calves. Shedding frequency was less in SC54-vaccinated cows and calves that received colostrum from those cows, compared with the other groups, and vaccination was specifically associated with less shedding of serogroup C1 salmonellae. Production data were similar among groups. Conclusions and Clinical Relevance: Vaccination of pregnant cows with an autogenous **Salmonella** bacterin had no effect on **fecal shedding** of salmonellae, whereas vaccination with a modified live S Choleraesuis vaccine reduced the frequency of **fecal shedding** of serogroup C1

salmonellae during the peripartum period. A commercial S Choleraesuis vaccine licensed for use in swine may be more efficacious than autogenous **Salmonella** bacterins on dairies infected with serogroup C1 salmonellae.

L9 ANSWER 18 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 13

AB Objective: To evaluate factors potentially associated with **fecal Salmonella shedding** among equine patients hospitalized for colic at a veterinary teaching hospital and to determine the effects of probiotic treatment on **fecal Salmonella shedding** and clinical signs. Design: Longitudinal study and controlled trial. Animals: 246 equine colic patients. Procedure: History and medical information were obtained from patient records. Fecal and environmental samples were submitted for aerobic bacterial culture for **Salmonella** enterica. Fifty-one patients were treated with a commercially available probiotic; 46 were treated with a placebo. Logistic regression was used to evaluate data. Results: **Salmonella** organisms were detected in feces from 23 (9%) patients at least once during hospitalization. Patients were more likely to shed **Salmonella** organisms if diarrhea was evident ltoreq 6 hours after hospitalization and duration of hospitalization exceeded 8 days (odds ratio (OR), 20.3), laminitis developed during hospitalization (OR, 12.0), results of nasogastric intubation were abnormal (OR, 4.9), leukopenia was evident ltoreq 6 hours after hospitalization (OR, 4.6), or travel time to the teaching hospital exceeded 1 hour (OR, 3.5). Horses treated with the probiotic did not differ from control horses in regard to likelihood of **fecal Salmonella shedding** (OR, 1.5) or prevalence of clinical signs. Conclusions and Clinical Relevance: Results suggest that certain risk factors are associated with **fecal shedding** of S enterica among equine patients hospitalized at a veterinary teaching hospital because of colic and that pathogen monitoring in patients and the hospital environment and use of barrier nursing precautions for equine colic patients are beneficial.

L9 ANSWER 19 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 14

AB Objective-To evaluate **fecal shedding** of Giardia duodenalis, Cryptosporidium parvum, **Salmonella** organisms, and Escherichia coli O157:H7 from llamas in California with respect to host factors and management practices. Animals-354 llamas from 33 facilities. Procedure-Fecal specimens were collected and examined for G duodenalis and C parvum by means of immunofluorescent microscopy. **Salmonella** organisms were cultured by placing feces into selenite enrichment broth followed by selective media. Escherichia coli O157:H7 was cultured by use of modified tryptocase soy broth followed by sorbitol MacConkey agar, with suspect colonies confirmed by means of immunofluorescent microscopy. Results-12 of 354 fecal specimens (3.4%) had G duodenalis cysts. Younger llamas (crias) were more likely to be shedding cysts, compared with older llamas. Farm-level factors that increased the risk of shedding were large numbers of yearlings on the property (> 10), smaller pen sizes, large numbers of crias born during the previous year (> 10), and large pen or pasture populations (> 20). None of the 354 fecal specimens had C parvum oocysts. Seventy-six (from 7 facilities) and 192 (from 22 facilities) llamas were tested for **Salmonella** organisms and E coli O157:H7, respectively. All fecal specimens had negative results for these bacteria. Conclusions and Clinical Relevance-Shedding of G duodenalis was primarily limited to crias 1 to 4 months old. Llamas from properties with large numbers of crias born in the previous year, resulting in large numbers of yearlings in the current year, were at greater risk of infection. In addition, housing llamas in smaller pens or pastures and managing llamas and crias in large groups also increased the risk of G duodenalis shedding.

L9 ANSWER 20 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 15

AB Serial passage of **Salmonella** enteritidis (SE) yields heterophil-adapted SE (HASE) strains that have resulted in decreased shedding of SE in feces and reduced egg contamination. Additionally, increasing the number of heterophil passages further reduced the number and frequency of **fecal shedding**. To evaluate SE and heterophil interaction, nine SE strains were fluorescein isothiocyanate-labeled when viable. There were six wild-types: SE TK 474, SE TK 584, SE TK 599, SE TK 600, SE TK 655, and SE TK 657; and three HASE strains: TK 499 heterophil adapted five times, TK 598 heterophil adapted six times, and TK 605 heterophil adapted 11 times. Trials were repeated seven times in duplicate with heterophils isolated from seven healthy chickens. Heterophils were incubated with the bacterial strains at 41 C for 15 min, and 10,000 heterophils were analyzed by flow cytometry. Percentage of phagocytosis and mean channel number of fluorescence were compared. Both parameters were significantly increased for all HASE-type strains compared with wild-type, nonadapted SE strains. Increased phagocytosis of HASE bacterial strains may be significant in processing and elimination of the HASE strains and may be related to the protective effect of HASE by decreased shedding of wild-type SE challenge strains.

L9 ANSWER 21 OF 96 MEDLINE

AB The goal of this study was to identify risk factors associated with increased **fecal shedding** of **Salmonella** enterica (SE) in groups of market swine reared in large three-site production units. We conducted an intensive, long-term investigation of potential management and environmental risk factors operating during the growing phase of pig production. Data regarding finisher site characteristics, biosecurity protocols, group growth performance, medication usage, and environmental temperature were collected. Results indicate that SE infection is common. Risk factors were identified at both the finisher site and group level. Biosecurity and hygiene practices (absence of a toilet, more than 2 people present at a finisher site daily, and other domestic species at the site), environmental temperature (winter and spring seasons, increased temperature variability, and below median high temperature the day of sampling), and production performance (above median feed conversion) were associated with elevated SE prevalence. In addition, an association between the floor space allowances per pig at the time of sampling (a measure of the number of pigs sold prior to sampling) was identified, with greater space allowance associated with decreased prevalence. The results of this study identify potential management practices for evaluation for SE control and suggest caution in interpretation of fecal culture results when sampling from different marketing groups in swine production systems.

L9 ANSWER 22 OF 96 CAPLUS COPYRIGHT 2003 ACS

AB The high mortality rate assocd. with human infections caused by Escherichia coli strains of the serotype O157:H7 has brought to public attention the importance of ruminants as reservoirs of food-borne pathogens. In addn. to established examples such as **Salmonella**, Campylobacter and Listeria, recent evidence is emerging of the role of food in the transmission of Helicobacter pylori and Mycobacterium paratuberculosis. Food-borne pathogens harbored by ruminants are spread through **shedding** in the feces and subsequent **fecal** contamination of raw food. Ruminant shedding appears to be affected by diet and, of particular concern, may be increased during fasting regimens imposed during transport to the slaughterhouse. The survival of food-borne pathogens in the ruminant gut is affected by many factors including microbe-microbe interactions, interactions involving plant metabolites and the presence of inhibitory end-product metabolites such as short-chain fatty acids. The potential importance of digesta flow and

bacterial detachment in shedding of food-borne pathogens is discussed. Exptl. procedures with dangerous pathogens have constraints, particularly in animal experimentation. This situation may be overcome by the use of rumen-simulating fermentors. One such system which, like the natural rumen, has a different turnover rate for solid and liq. digesta, was found to maintain rumen-like variables over an 11 d period. This system may prove useful for the study of dietary effects on food-borne pathogens.

L9 ANSWER 23 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB The objective of this study was to design an improved diagnostic system for the identification and quantitation of **Salmonella** spp. in veterinary fecal specimens by utilizing real-time PCR technology. Current PCR methods used in this laboratory have led to false positive results due to non-specific amplification. Real-time PCR technology increases the specificity of the detection assay as compared to standard PCR methods through the addition of a sequence specific probe and can confirm **fecal shedding** of **Salmonella** within 24 hours of sample procurement. Primer and probe sets were designed to target three genes involved in the pathogenesis of **Salmonella** spp.; sipC, invE and spaQ. These primer/probe sets were tested on purified genomic DNA from 32 **Salmonella** isolates encompassing serogroups B, C1, C2, D and E. Twenty-two non-**Salmonella** isolates including related Enterobacteriaceae and other bacteria known to be invasive, including Yersinia enterocolitica and Listeria monocytogenes, were also tested to determine the specificity of the assay. The use of the sipC primer/probe set accurately detected 87.5% of the **Salmonella** isolates tested. Similarly the invE set detected 97% and the spaQ set identified 100% of **Salmonella** spp tested. In all three cases, specificity for **Salmonella** spp. was 100%. The assay was adapted for detection of **Salmonella** spp. from fecal specimens by using GeneReleaserTM (Bioventures, Murfreesboro, TN) to extract DNA from fecal specimens that had been enriched in BHI broth for 24 hours. Preliminary data using the invE primer/probe set showed that the addition of GeneReleaserTM to the amplification reaction does not inhibit fluorescence detection. Positive detection of **Salmonella** spp. occurred in 60% of the samples tested, as compared with culture, while the specificity for **Salmonella** spp. was 100%. The study will be expanded to include the spaQ primer/probe set in the detection of **Salmonella** spp. in fecal specimens.

L9 ANSWER 24 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 16
AB Free-living waterfowl residing in metropolitan parks in central Ohio were surveyed for the **fecal shedding** and antimicrobial susceptibility patterns of Campylobacter jejuni, Escherichia coli, **Salmonella** spp., and Pasteurella multocida. In addition, a survey for intestinal parasites was also conducted in these same waterfowl to determine parasite burdens in free-living waterfowl. Prevalences of 67%, 50%, and 0.2% of E. coli, C. jejuni, and **Salmonella** spp., respectively, were observed for all waterfowl species. Pasteurella multocida was not isolated from the sampled population. **Salmonella** java was isolated from one mallard duck. Statistically, there was a significantly higher E. coli isolation rate for mallard ducks than for Canada geese, but no difference was observed for C. jejuni isolation rates between waterfowl species. Antimicrobial susceptibility testing was conducted via the disk diffusion method and multidrug resistance was exhibited for penicillin G, lincomycin, vancomycin, erythromycin, and bacitracin. In addition, the prevalence of endoparasites in these sampled waterfowl ranged from 5% to 66%. Protozoan oocysts were most prevalent followed by nematode ova. No trematode or cestode ovum was recovered from this sampled population.

L9 ANSWER 25 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE

17
AB A cross-sectional study was performed to determine the relationship of farm variables and management practices to **fecal shedding** of Campylobacter or **Salmonella** on commercial squab (young pigeon) farms. A detailed survey provided information on biosecurity, cleaning and disinfection, bird health, vector control, and loft and pen. Twenty pigeons on each of 12 farms were cultured before and after the producers completed a voluntary quality assurance training program (QAP), based on principles of hazard analysis critical control point (HACCP). The prevalence of positive samples for **Salmonella** and C. jejuni was 1/480 (0.21%) and 19/480 (3.96%), respectively. Campylobacter was present on one farm during both visits; three farms during the first visit, and three farms during the second visit. Analysis by fixed-effects logistic regression showed the probability of having a positive C. jejuni culture was increased by not using dry manure in the nesting material, not cleaning shipping crates, cleaning landing boards, and by increased frequency of chemical disinfection of water. Having a positive parent and higher numbers of squab per pen (density) were also associated with higher odds of being positive for C. jejuni. Factors not associated with a positive C. jejuni culture included, other avian species on the farm, type of shipping crate, covered drinkers, fly problems, bird age, level of nest box within the loft, and QAP training. Prevalence of food safety pathogens was extremely low on the squab facilities tested as compared with reports from commercial broiler or turkey flocks. This observation suggests that one or more farm variables or management practices were effectively reducing infection, or possibly a species-related difference existed in carriage rates and shedding of pathogens. These results emphasize critical control points for food safety pathogens may vary widely, and the formulation of effective QAP programs are dependent on science-based knowledge of diverse animal production systems.

L9 ANSWER 26 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 18

AB Intensive longitudinal investigations of breeding and growing pig populations in two multiple-site swine production systems were conducted in NC, USA. Five cohorts of sows and individually identified growing pigs from their litters were serially sampled in order to determine the prevalence and serotypes of **Salmonella** enterica in each stage of production based on fecal culture. In addition to fecal samples, feed and environmental samples were obtained. Fifteen different serotypes were isolated from the two systems, the most frequently isolated serotypes were S. typhimurium var Mbandaka and S. typhimurium var Copenhagen. Pig prevalence estimates ranged from 0 to 48.1%. Environmental contamination was frequently encountered despite cleaning and disinfection. Feed was rarely (2/800, 0.25%) identified as S. enterica positive. We observed highly variable patterns of S. enterica prevalence and serotype profiles within cohorts over time and among cohorts within systems. These observations indicate that point estimates of S. enterica prevalence and serotypes cannot be considered as reliable indicators of the S. enterica status of farms, and that uncontrolled studies of interventions to control S. enterica may yield misleading results. These findings are critical to the design of epidemiological studies of S. enterica on swine farms and may suggest that cohort level, as opposed to farm or company level events or management practices, may be important as potential risk factors for S. enterica **fecal shedding** in market age pigs.

L9 ANSWER 27 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 19

AB As part of a national study of the U.S. dairy cow population, fecal samples were collected from representative cows on 91 dairies and 97 cull dairy cow markets in 19 states. **Salmonella** spp. were recovered from 5.4% of milk cows, 18.1% of milk cows expected to be culled within 7

days, and 14.9% of culled dairy cows at markets. On a premise basis, **Salmonella** shedding in milk cows was detected on 21.1% of dairies and 66% of cull dairy cow markets. The percentage of herds with at least one cow with detectable **Salmonella fecal shedding** was higher during the sampling period from May through July, in herds with at least 100 milk cows, and in herds in the South region. The most common **Salmonella** serogroups isolated were E (30.8% of isolates) and C1 (28.6%); the most common serotypes isolated were **Salmonella** montevideo (21.5% of isolates), **Salmonella** cerro (13.3%), and **Salmonella** kentucky (8.5%). **Fecal shedding** of **Salmonella** typhimurium or **Salmonella** typhimurium var. copenhagen was infrequent (2.8% of isolates). Most isolates (88.9%) were susceptible to all 17 antimicrobials evaluated; multiple resistance was an infrequent occurrence. This study provides information describing the distribution of **Salmonella fecal shedding** from dairy cows on farm and at markets and will serve as a baseline for future studies.

L9 ANSWER 28 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 20

AB Little is known about factors which enable **Salmonella** serotypes to circulate within populations of livestock and domestic fowl. We have identified a DNA region which is present in **Salmonella** serotypes commonly isolated from livestock and domestic fowl (S. enterica subspecies I) but absent from reptile-associated **Salmonella** serotypes (S. bongori and S. enterica subspecies II to VII). This DNA region was cloned from **Salmonella** serotype Typhimurium and sequence analysis revealed the presence of a 6,105-bp open reading frame, designated shdA, whose product's deduced amino acid sequence displayed homology to that of AIDA-I from diarrheagenic Escherichia coli, MisL of serotype Typhimurium, and IcsA of Shigella flexneri. The shdA gene was located adjacent to xseA at 52 min, in a 30-kb DNA region which is not present in Escherichia coli K-12. A serotype Typhimurium shdA mutant was shed with the feces in reduced numbers and for a shorter period of time compared to its isogenic parent. A possible role for the shdA gene during the expansion in host range of S. enterica subspecies I to include warm-blooded vertebrates is discussed.

L9 ANSWER 29 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 21

AB Very little is known about the contribution of surface appendages of **Salmonella** enterica serovar Enteritidis to pathogenesis in chickens. This study was designed to clarify the role of SEF14, SEF17, and SEF21 fimbriae in serovar Enteritidis pathogenesis. Stable, single, defined sefA (SEF14), agfA (SEF17), and fimA (SEF21) insertionally inactivated fimbrial gene mutants of serovar Enteritidis were constructed. All mutant strains invaded Caco-2 and HT-29 enterocytes at levels similar to that of the wild type. Both mutant and wild-type strains were ingested equally well by chicken macrophage cell lines HD11 and MQ-NCSU. There were no significant differences in the abilities of these strains to colonize chicken ceca. The SEF14- strain was isolated in lower numbers from the livers of infected chickens and was cleared from the spleens faster than other strains. No significant differences in **fecal shedding** of these strains were observed.

L9 ANSWER 30 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 22

AB An experiment was conducted to determine (i) the effects of antibiotic regimens on the shedding patterns of pigs infected with **Salmonella** Typhimurium and (ii) whether antibiotic resistance increases the incidence of pathogen shedding. The experiment involved 48 50-day-old pigs challenged with **Salmonella** Typhimurium and receiving one of four antibiotic regimens including (i) intramuscular injection of ceftiofur

sodium followed by inclusion of oxytetracycline in the feed; (ii) apramycin in the feed for 14 days followed by oxytetracycline; (iii) carbadox in the feed until pigs reached 35 kg followed by oxytetracycline; (iv) no antibiotics (control). Fecal samples were collected preinoculation, 2 and 4 days postinoculation (DPI) and at weekly and biweekly intervals thereafter to determine shedding patterns. **Salmonella** Typhimurium isolates from 2, 4, 7, 21, 42, and 70 DPI were analyzed for antibiotic resistance. A time effect ($P < 0.05$) was observed, indicating that the proportion of isolates resistant to at least one antibiotic varied over time. Overall resistance was determined to be 46% at 2 DPI and increased significantly ($P < .05$) thereafter. Treatment X time and antibiotic X time interactions were also observed ($P < 0.05$) as the percentage of isolates resistant to each test antibiotic increased over time. In no case did the development of antibiotic resistance result in an increased incidence of shedding of the original inoculate. The incidence of shedding was reduced in pigs receiving the apramycin-oxytetracycline treatment, when compared to control pigs; however, no differences were observed between antibiotic treatments.

L9 ANSWER 31 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 23

AB **Salmonella** Enteritidis is an important pathogen for the layer industry, primarily because of its ability to infect hens and ultimately contaminate egg contents. Studies have shown that stress situations, such as flock recycling (induced molting), can increase **Salmonella** Enteritidis problems in the flock. The present study examined the effect of antibiotic treatment and competitive exclusion (CE) on **Salmonella** Enteritidis shedding in the period following molt and 14-day feed withdrawal. In two separate trials, 48 birds after molt and feed withdrawal were divided into one group that was treated for 10 days with enrofloxacin in water followed by administration of CE culture and a group that was left untreated. **Salmonella** Enteritidis shedding was significantly reduced in the antibiotic-CE group. The **Salmonella** Enteritidis shedding rate was 33 and 25% in untreated birds versus 4 and 0% in the enrofloxacin-CE group on the two test days. These results indicate that treatment of **Salmonella** Enteritidis-positive laying hens after molting with enrofloxacin and CE culture can substantially reduce **Salmonella** Enteritidis problems due to molting and would be a possible alternative to diverting eggs for pasteurization or slaughtering the infected flock. Possible development of bacterial resistance in conjunction with antibiotic use is also discussed.

L9 ANSWER 32 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 24

AB Two strains of 27-wk-old commercial laying chickens (strain A, brown-egg-laying type and strain B, white-egg-laying type) were inoculated either orally (PO) or intravenously (IV) with a field isolate of **Salmonella** enteritidis phage type 4. Chickens were sequentially necropsied at regular intervals throughout the 17-wk observation period. Gross and microscopic lesions were most evident between 1 and 14 days postinoculation (DPI). Gross lesions consisted of enlarged livers with white foci, enlarged and mottled white spleens, fibrinous exudate in the peritoneum, and atretic, misshapen ovarian follicles. Microscopic lesions included multifocal coagulative necrosis of hepatocytes and inflammation, fibrinous exudation in vascular sinuses of the spleen, and fibrinosuppurative inflammation of the peritoneum and ovarian follicles. The proportion of reproductive organ infections (ovary and oviduct) in the IV group, 83% (20/24, $P = 0.007$; 50% and 33% for strains A and strain B birds, respectively), was higher than that of the PO group, 46% (11/24; 29% and 17% for strains A and B, respectively), for the first 16 days of observation postinoculation. The proportion of **fecal shedding** for the IV group of birds was significantly ($P = 0.009$) lower, 29% (7/24; 33% and 25% respectively for strain A and strain B

birds, respectively), than the PO group, 67% (16/24; 75% and 58% for strain A and strain B birds, respectively). Three (2.6%) of 234 egg pools were culture-positive for group D **Salmonella** from strain A chickens (1 of 119 pools from the IV group and 2 of 115 pools from the PO group of birds). Chickens infected with the field strain of S. enteritidis phage type 4 harbored the organism in tissues only for a brief time, most clearing within 8 DPI and nearly all within 16 DPI. Overall the percentage of culture-positive birds did not differ significantly ($P > 0.05$) between birds with and without lesions, but isolation of S. enteritidis tended to be more frequent when lesions were evident. This experiment also demonstrated that brown-egg-laying-type chickens were more susceptible than white-egg-laying-type chickens to S. enteritidis phage type 4 isolated from California based on gross and microscopic lesions and bacteriologic findings.

L9 ANSWER 33 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 25

AB Objective-To estimate prevalence of **fecal shedding** of **Salmonella** spp among horses in the US horse population and prevalence of **Salmonella** spp in grain or other concentrate used as horse feed on equine operations in the United States. Design-Cross-sectional survey. Sample Population-Horses on 972 operations in 28 states. Procedure-Fecal samples were collected from horses resident at each operation. Only a single sample was collected from any individual horse, number of horses from which samples were collected on each operation was determined on the basis of number of horses on the operation. A single sample of grain or concentrate was also collected from each operation. All samples were tested for **Salmonella** spp by means of bacterial culture. Results-Overall, 0.8% (SE, 0.5) of resident horses shed **Salmonella** spp in their feces. The overall prevalence of operations positive for **fecal shedding** of **Salmonella** spp (ie, operations with gtoreq 1 horse shedding **Salmonella** spp in its feces) was 1.8% (SE, 0.7). Prevalence of grain or other concentrate samples positive for **Salmonella** spp was 0.4%. Serotypes of **Salmonella** spp that were identified in grain or other concentrate were not those typically associated with clinical disease in horses. Conclusions and Clinical Relevance-Results suggest that the national prevalence of **fecal shedding** of **Salmonella** spp by horses in the United States was 0.8%, and that prevalence of **Salmonella** spp in grain or other concentrate used for horse feed was 0.4%.

L9 ANSWER 34 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 26

AB We have previously reported that the administration of a competitive exclusion culture (PCF-1), derived from the cecal microflora of a young, healthy pig and maintained in a continuous flow fermentation system to neonatal pigs resulted in a decrease in the incidence of **fecal shedding** and cecal colonization by **Salmonella** choleraesuis in pigs at weaning. In the present experiment, we describe the effects of the administration of a derivative of the PCF-1 culture, RPCF, against an enterotoxigenic E. coli infection in neonatal pigs raised off-sow. The administration of RPCF at 12 and 24 hours after birth resulted in significant ($P < 0.05$) reductions in mortality, incidence of **fecal shedding**, and in gut colonization by E. coli when compared to control values. The RPCF reduced mortality from 17.5%, observed in untreated pigs, to 4.4% in RPCF-treated pigs. **Fecal shedding** of E. coli was reduced significantly ($P < 0.05$) in RPCF-treated pigs between Days 1 and 3 post-challenge. These results indicate that the RPCF culture is effective against one of the most important causes of neonatal scours (E. coli infections) in piglets.

L9 ANSWER 35 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE

27
AB In 1996, data on management practices used on US dairy operations were collected and analyzed for association with **fecal shedding** of **Salmonella** by dairy cows. A total of 4299 fecal samples from 91 herds was cultured for **Salmonella** isolation. Herd-size (adjusted odds ratios (OR) = 5.8, 95% CI 1.1, 31.3), region (OR = 5.7, CI 1.4, 23.5), use of flush water systems (OR = 3.5, CI 0.9, 14.7), and feeding brewers' products to lactating cows (OR = 3.4, CI 0.9, 12.9) were identified as the most important predictive risk factors. The population attributable risks (PARs) for herd-size, region, flush water system, and feeding brewers' products to lactating cows were 0.76, 0.46, 0.37, and 0.42, respectively. The estimated PAR for all four risk factors combined was 0.95. The effects of these factors need to be more-closely evaluated in more-controlled studies, in order to develop intervention programs that reduce **Salmonella** shedding.

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L9 ANSWER 37 OF 96 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AB Rotavirus is the most common gastrointestinal pathogen present in day-care settings. Control and prevention of rotavirus infection are difficult because of the lack of a licensed vaccine, the absence of any effective treatment other than palliative measures and the presence of asymptomatic children **shedding** virus. Rotavirus is transmitted by **fecal**-oral contact and possibly by contaminated surfaces and hands and respiratory spread. Other gastrointestinal pathogens are also transmitted primarily by the fecal oral route, although contaminated surfaces, hands or food may also serve to transmit infection in some cases. Control and prevention measures for all enteric pathogens include isolating infected children from others, thoroughly cleaning and disinfecting environmental surfaces with effective agents and strictly following handwashing procedures before and after contact with infected persons and/or potentially contaminated surfaces.

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L9 ANSWER 39 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 29
AB Intestinal colonization and shedding of pathogenic bacteria in animal feces is an important factor in both human food safety and animal health. The effect of broiler feed additives flavophospholipol (FPL; Flavomycin(R), bambermycins) and salinomycin sodium (SAL; Sacox(R)) given singly on the excretion of **Salmonella** enteritidis, Campylobacter jejuni, and Clostridium perfringens was studied following controlled infection. The incidence of **shedding** (number of birds with positive **fecal** cultures) and the degree of **shedding** (cfu per gram of feces in positive birds) were measured to determine the influence of these two common feed additive antibiotics on shedding rates of potential pathogens. A total of 216 Ross broiler chickens, housed in battery cages, were fed either an unmedicated feed (controls), feed containing FPL, or feed containing SAL. Feed treatment groups were subdivided into three bacterial challenge groups of 24 chicks, each receiving only one of the pathogens. Bacterial challenge was administered orally on Days 11 and 12 for **Salmonella** and Campylobacter and on Days 2 and 3 for Clostridium. Fecal samples were collected weekly up to 6 wk of age and cultured for presence of the target organism. The shedding rate was determined by decimal dilutions of the fecal samples. Feeding FPL

resulted in a reduced (P ltoreq 0.05) degree and incidence of **Salmonella** and Clostridium shedding at 6 wk. Feeding SAL reduced (P ltoreq 0.05) the incidence of **Salmonella** shedding at 6 wk. Neither feed additive affected the incidence nor the degree of Campylobacter shedding. The results of this study indicate that these feed additives may reduce the incidence of these potential human and animal pathogens in preslaughter broilers.

L9 ANSWER 40 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 30

AB Objective-To determine whether stress associated with transportation or feed withdrawal increased **fecal shedding** of **Salmonella** Typhimurium among pigs experimentally infected with the organism. Animals-86 healthy pigs. Procedure-Pigs were challenge exposed with **Salmonella** Typhimurium at 4 weeks old and reared conventionally. When pigs reached market weight, they were assigned to groups and subjected to various combinations of transportation and feed withdrawal. Ileocecal contents were collected after slaughter and tested for **Salmonella** Typhimurium. Results-**Salmonella** Typhimurium was not detected in feces collected from pigs just prior to slaughter. When feed was withheld for 24 hours prior to slaughter, the proportion of transported pigs with **Salmonella** Typhimurium in ileocecal contents at the time of slaughter was not significantly different from the proportion of nontransported pigs. However, when feed was not withheld prior to slaughter, the proportion of transported pigs with **Salmonella** Typhimurium in ileocecal contents at the time of slaughter was significantly higher than the proportion of nontransported pigs. Conclusions and Clinical Relevance-When carrier pigs remained on feed, transportation stress increased the proportion positive for **Salmonella** sp. On the basis of results reported here, it is suggested that producers withhold feed from pigs for 24 hours prior to transportation to a slaughter plant.

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AB Prophylactic effects of Bifidobacterium longum HY8001, Korean isolate, against Escherichia coli O157:H7 and **Salmonella** typhimurium DT104 enteric infection were examined at four groups of specific pathogen free(SFP)-ICR mouse for each pathogen. B. longum HY8001+S. typhimurium DT104+B. longum HY8001 (BL+ST+BL)group and B. longum HY8001+E. coli O157:H7+B. longum HY8001(BL+E+BL)group were fed with B. longum HY8001 before and after E. coli O157:H7 or S. typhimurium DT104 challenge, while B. longum HY8001+S. typhimurium DT104(BL+ST) and B. longum HY8001+E. coli O157:H7(BL+E) groups were fed with B. longum HY8001 only before E. coli O157:H7 or S. typhimurium DT104 challenge. E. coli O157:H7(E) and S. typhimurium DT104(ST) groups were challenged with each pathogen without B. longum HY8001 administration and control groups were administered with phosphate buffered solution(PBS). After the oral administration with B. longum HY8001(109 cfu), the mice were challenged with E. coli O157:H7(2 x 1010 cfu) or S. typhimurium DT104(108 cfu) and the mortality rate and the **fecal shedding** of challenged pathogen were also examined to define the reactivity of the B. longum HY8001. Production of toxin neutralizing substance(s) of B. longum HY8001 was determined by cell cytotoxicity assay using Vero cells. **Fecal shedding** of the S. typhimurium DT104 was significantly decreased in BL+ST+BL group fed with B. longum HY8001 before and after challenge($p<0.05$), while the fecal sheddings of S. typhimurium DT104 in BL+ST and ST groups remained more than 106 cfu. The protective effect of the B. longum HY8001 against E. coli O157:H7 was significantly high only in BL+E+BL group fed with B. longum HY8001 before and after E. coli O157:H7 challenge from the result of fecal E. coli O157:H7 isolation rate, mortality rate, and intestinal contents culture to detect E. coli O157:H7. The mortality rate of the BL+E and E groups was 20% and 30% respectively, when that of the BL+E+BL group was 0%. The isolation rates of E. coli O157:H7 from the intestinal

contents in BL+E+BL, BL+E, and E group resulted in 50%, 87.5%, and 86%, respectively. However, the E. coli O157:H7 isolation rate from the feces of BL+E+BL group was not lower than those of BL+E and E groups. The cytopathic effect (CPE) of the Vero cytotoxin (Shiga like toxin I and II) in Vero cell was neutralized in B. longum HY8001 culture supernatant added wells which indicate the presence of soluble Vero cytotoxin neutralizing substance(s) in B. longum HY8001 culture supernatant.

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L9 ANSWER 44 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

L9 ANSWER 45 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 33

L9 ANSWER 46 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 34

AB Objectives:To predict mortality of horses by use of clinical data from the first day of hospitalization, to determine whether **fecal shedding** of **Salmonella** organisms is related to severity of clinical disease, and to determine the impact of **fecal shedding** of **Salmonella** organisms on mortality. Design:Prospective study. Animals-1,446 hospitalized horses. Procedure:Medical information was obtained from horses hospitalized in an intensive care unit or isolation facility during a 4.5-year period. A model was created to predict mortality, using covariates determined on the day of admission. Predicted mortality provided a measure of clinical condition. Predicted mortality was compared between horses that were and were not shedding **Salmonella** organisms in their feces to determine whether shedding was associated with severity of disease. Predicted and observed mortality between horses were also compared to evaluate the association between **fecal shedding** of **Salmonella** organisms and mortality. Results:92 horses were identified as shedding **Salmonella** organisms. In a multivariable model, 4 variables (heart rate, respiratory rate, rectal temperature, and clinical management) were associated with mortality. A higher predicted probability of death was observed in horses that shed **Salmonella** krefeld or more than 1 serotype. Relative risk (RR) of mortality was high for horses shedding S typhimurium (RR, 1.94; 95% confidence interval, 1.04 to 3.59) and multiple serotypes (RR, 4.75; 95% confidence interval, 2.29 to 9.84). When the clinical condition (ie, prior predicted probability of death) was taken into consideration, **fecal shedding** of **Salmonella** organisms was not significantly associated with mortality. Clinical Implications:In this horse population, **fecal shedding** of S krefeld was associated with more severe clinical conditions at the time of admission; however, **fecal shedding** of **Salmonella** organisms during hospitalization did not alter predicted mortality.

L9 ANSWER 47 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 35

AB Serial passage of **Salmonella** enteritidis (SE) in chicken heterophils resulted in heterophil-adapted SE (HASE). We now report that an additional five heterophil passages have further reduced the number and frequency of **fecal shedding** of HASE. Eleven-times HASE

(11X HASE) given to 12 laying hens for three consecutive days reduced **fecal shedding** of 11X HASE to three isolations from fecal samples during the 70-day postexposure observation period. Hens were exposed to challenge SE 74 days after treatment with 11X HASE. Three of 12 11X HASE-treated hens were positive for challenge SE (11/396 fecal samples, or 2.8%) between days 5 and 40 postchallenge, whereas all 12 challenge control birds were positive (118/420 fecal samples, or 28.1%) for SE. None of 12 11X HASE-treated hens was fecal positive from day 9 postchallenge, whereas 10 of 12 challenge control hens (82/372 fecal samples, or 22.0%) remained positive until day 40, the termination of the experiment. None of 525 eggs and eggshells cultured after 11X HASE exposure was positive for **Salmonella**, and none of 422 eggs and eggshells cultured after challenge SE exposure was positive for **Salmonella**. Eggs or eggshells from challenge control hens were positive for **Salmonella** in 12/479 (2.5%) cases after challenge SE exposure.

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AB A model for experimental and natural infection of early weaned pigs with **Salmonella** choleraesuis, the aetiologic agent of swine paratyphoid, has been developed. An oral dose of 10(8) colony forming units (cfu) of S choleraesuis caused 100 per cent infection of 10 pigs inoculated, as indicated by recovery of the challenge organism from ileocolic lymph nodes collected at necropsy seven days post challenge. Seven of the pigs were observed shedding S choleraesuis at least once post S choleraesuis challenge. The cumulative incidence of shedding was 30 per cent and was sufficient to infect four of 10 pigs exposed naturally. Oral challenges with less than 10(8) cfu S choleraesuis were less effective in infecting early weaned pigs and did not result in natural transmission.

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L9 ANSWER 50 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 37

AB Objective-To determine prevalence of **fecal shedding** of **Salmonella** organisms among captive green iguanas (Iguana iguana). Design-Cohort study. Animals-12 captive green iguanas. Procedure-Iguanas were isolated in an environmental chamber, and fecal samples were collected weekly for 10 consecutive weeks. Samples were incubated aerobically in tetrathionate broth for 18 to 24 hours. Aliquots were then transferred to Hektoen and **Salmonella**-Shigella agar plates and incubated for an additional 18 to 24 hours. Isolated colonies were subcultured on nutrient agar slants, and **Salmonella** isolates were serogrouped and serotyped. Results-All 12 iguanas were found to be shedding **Salmonella** organisms at least once during the study, and multiple serotypes were isolated from 7 of the 12. **Salmonella** organisms were isolated from 88 of 106 (83%) fecal samples; 21 samples contained multiple **Salmonella** serotypes. Overall, 11 **Salmonella** serotypes were identified. In 74 of 100 instances, when a particular **Salmonella** serotype was isolated from an individual iguana, the same serotype was also isolated from a subsequent fecal sample from that iguana. Clinical Implications-Results suggested that most iguanas have a stable mixture of **Salmonella** serotypes in their intestinal tracts and intermittently or continuously shed **Salmonella** organisms in their feces. Veterinarians should advise their clients on precautions for reducing the risk of acquiring these organisms from their pets. Public health officials trying to determine

whether an iguana is the source of a specific **Salmonella** serotype that caused infection in human patients should submit at least 3 fecal samples collected from the iguana 1 week apart for bacterial culture.

L9 ANSWER 51 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

L9 ANSWER 52 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 38

AB Serial passage of wild-type **Salmonella** enteritidis (SE) in chicken heterophils resulted in decreased shedding of SE in chicken feces and reduced egg contamination. When serially heterophil-passaged strains (heterophil-adapted SE (HASE)) were given to groups of 12 or more laying hens in drinking water at a dose of 108 colony-forming units for 3 consecutive days, the inoculum persisted in the feces at low frequently for a few days only. Two challenge wild-type strains, given in similar manner, persisted in feces at high frequency for 25 days or longer. The persistence of challenge strains in hens previously exposed to HASE was considerably shorter and occurred less frequently than persistence and frequency in challenge control hens. HASE strains were not isolated from any of 494 eggs laid after exposure to HASE. The challenge strain was isolated from 15 of 208 eggs (7.2%) after challenge of control hens and never from 461 eggs laid after challenge of "vaccinated" hens. I concluded that HASE clones obtained by five or more cycles of heterophil phagocytosis were avirulent and immunogenic.

L9 ANSWER 53 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 39

AB Factors affecting immunogenicity of the first 2 doses of oral poliovirus vaccine (OPV) among unimmunized Mayan infants were prospectively evaluated. The relative impact of multiple variables, including mass or routine vaccination, concurrent enteric bacterial (**salmonella**, shigella, and campylobacter) and viral (adenovirus 40/41, astrovirus, nonpolio enteroviruses, and rotavirus) infections, interference among Sabin vaccine viruses, and preexisting poliovirus antibodies were studied. Sera were available from 181 infants after 2 OPV doses. Seroresponses were 86% to Sabin type 1, 97% to Sabin type 2, and 61% to Sabin type 3 vaccines. Mass versus routine vaccination and preexisting poliovirus antibodies did not affect immunogenicity. By multiple logistic regression analysis, **fecal shedding** of homologous Sabin strains was associated with increased seroresponses to all Sabin types, especially to Sabin type 3. Decreased OPV immunogenicity was primarily attributable to interference of Sabin type 3 by Sabin type 2. OPV formulations with higher doses of Sabin type 3 could improve immunogenicity among infants in developing countries.

L9 ANSWER 54 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 40

AB Objective-To compare prevalence of **fecal shedding** of **Salmonella** organisms and serum antibodies to **Salmonella** sp in market-age pigs housed in barns with partially slotted floors or solid floors with open-flush gutters. Design-Cross-sectional study of prevalence. Sample Population-Finishing-age pigs deemed by the producer to be within 1 month of slaughter. Procedure-Fecal and serum samples were obtained from a group of 121 pigs housed in a barn with solid floors (31 fecal samples, 30 serum samples) and from a group of about 400 pigs housed on partially slotted floors (57 fecal samples, 64 serum samples). Fecal samples were submitted for bacteriologic culture to detect **Salmonella** organisms, and serum samples were tested for antibodies by use of ELISA. Results-**Salmonella** agona was isolated from 26 of 31(84%) fecal samples obtained from pigs housed in the open-flush gutter barn, compared with 5 of 57 (9%) fecal samples from pigs in the barn with slotted floors. Median value for optical density was higher for

serum samples from pigs housed in the openflush gutter barn. Clinical Implications-Housing of finishing-age swine in barns with open-flush gutters may contribute to increased shedding of **Salmonella** sp. Analysis of our observations indicated that repeated exposure to infected feces is important in prolonging **fecal shedding** by swine.

L9 ANSWER 55 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 41

AB Objective-To evaluate the safety and efficacy of avirulent live **Salmonella** choleraesuis strain 54 (SC54) as a vaccine to protect calves against salmonellosis caused by S. dublin. Animals-40 head of clinically normal 3 to 5-week-old male Holstein calves that were culture negative for **Salmonella** sp. Procedure-Calves were randomly assigned to 4 test groups of 10 calves each. Group 1 received 8.5 times 10-7 colony-forming units (CFU) of SC54 SC. Groups 2 and 3 received 1.13 times 10-9 CFU of SC54, SC and intranasally, respectively. Group 4 received saline solution as a vaccine control. All calves were challenge exposed orally with 1.74 times 10-9 CFU of virulent S. dublin 14 days after vaccination. Clinical signs and **Salmonella** shedding were monitored for 28 days after vaccination. Calves were necropsied, and organs were cultured for **Salmonella** sp. 14 days after challenge exposure. Results-Calves of groups 2 and 3 had slightly high rectal temperature after vaccination. **Salmonella** dublin challenge exposure resulted in mild clinical signs of salmonellosis. All vaccinated groups had significantly (P lt 0.05) lower rectal temperature, **fecal shedding** of S. dublin, and recovery of S. dublin from organs after necropsy. SC54 was not recovered from fecal or blood samples collected after vaccination or from injection site samples or organs collected at necropsy. Conclusions-SC54 given intranasally or SC to calves was safe and significantly (P lt 0.05) reduced clinical signs and bacterial shedding after oral challenge exposure with S. dublin. Clinical Relevance-SC54 has potential as an effective vaccine to aid in prevention of salmonellosis caused by S. dublin in calves.

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AB We evaluated the safety and efficacy of avirulent live **Salmonella** choleraesuis strain 54 (SC54) as a vaccine to protect calves against salmonellosis caused by S. dublin. All calves were challenge exposed orally with 1.74 x 10 super(9) CFU of virulent S. dublin 14 days after vaccination. Clinical signs and **Salmonella** shedding were monitored for 28 days after vaccination. Calves were necropsied, and organs were cultured for **Salmonella** sp 14 days after challenge exposure. **Salmonella** dublin challenge exposure resulted in mild clinical signs of salmonellosis. All vaccinated groups had significantly lower rectal temperature, **fecal shedding** of S. dublin, and recovery of S. dublin from organs after necropsy. SC54 was not recovered from fecal or blood samples collected after vaccination or from injection site samples or organs collected at necropsy. SC54 given intranasally or SC to calves was safe and significantly reduced clinical signs and bacterial shedding after oral challenge exposure with S. dublin.

L9 ANSWER 57 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 42

AB In groups of chickens vaccinated orally or intramuscularly with a live aroA mutant **Salmonella** typhimurium vaccine strain and then experimentally inoculated with 10-8 CFU of wild type S. typhimurium or 10-9 CFU of S. enteritidis, faecal shedding of the vaccine and wild type strains was monitored by the buffered peptone water-modified semisolid Rappaport Vassiliadis medium method, which detected less than 10-2 CFU per gram of faeces. The vaccine strain was shed in the faeces for up to 26 days. Vaccination failed to reduce the faecal shedding of wild type S. typhimurium or S. enteritidis. The variation in the shedding patterns of

chickens within each group was greater than between treatment groups.

L9 ANSWER 58 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 43

AB Detecting **Salmonella** enteritidis contamination in eggs has become the cornerstone of many programs for reducing egg-borne disease transmission, but egg culturing is time consuming and laborious. Preliminary screening tests are thus generally applied to minimize the number of flocks from which eggs must be cultured. The usefulness of such tests is directly proportional to both their detection sensitivity and their ability to predict the likelihood of egg contamination. In the present study, samples were collected for 24 days after groups of laying hens were orally inoculated with S. enteritidis. Eggs from each hen were cultured for S. enteritidis in the contents and samples of egg yolk were diluted and tested for specific antibodies to S. enteritidis flagella using both experimental and commercially available enzyme-linked immunosorbent away (ELISA) methods. Samples of voided feces were also collected regularly from each bird and cultured for S. enteritidis. Although **fecal shedding** and egg yolk antibody production followed opposite patterns over time (**fecal shedding** was decreasing as egg yolk antibody titers were increasing), tests for both parameters were effective in predicting whether particular hens would lay contaminated eggs. Among hens that laid at least one egg contaminated by S. enteritidis, 82% were detected as infected by fecal culturing and 96% by the experimental egg yolk ELISA test. Using easily collected samples, egg yolk antibody testing offers a rapid and effective screening method for identifying S. enteritidis-infected laying flocks that might lay contaminated eggs.

L9 ANSWER 59 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 44

AB Two collections of exotic felids were screened for the presence of **Salmonella** by selective fecal culture utilizing selenite broth and Hektoen enteric agar. In gt 90% of the samples, **Salmonella** was isolated from a single culture. A commercial horsemeat-based diet was fed in both collections, and one collection also was fed raw chicken. **Salmonella** was cultured from the raw chicken and the horsemeat diet for both collections. Multiple **Salmonella** serotypes were identified, with S. typhimurium and S. typhimurium (copenhagen) isolated most frequently. Approximately half of the **Salmonella** isolates demonstrated multiple antibiotic resistance. The ability to harbor **Salmonella** as normal nonpathogenic bacteria of the gastrointestinal tract may be a physiological adaptation to carnivory. The high rate of **fecal shedding** of **Salmonella** in healthy individuals clouds the interpretation of a positive fecal culture in an ill felid, or one with diarrhea. All zoo employees having contact with cat feces or raw diets have a high rate of occupational exposure to **Salmonella** and should exercise appropriate hygienic precautions.

L9 ANSWER 60 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 45

AB The purpose of this study was to evaluate the effects of probiotic administration on the prevalence of **fecal shedding** of **Salmonella**. the prevalence of postoperative diarrhea, the length of antimicrobial therapy, and the length of the hospitalization stay during the postoperative period in horses with colic. Two commercially available probiotics for horses were used in a double-blind prospective study of 200 horses undergoing surgery for colic. Probiotic or placebo was administered PO once a day for 7 days postoperatively, and fecal cultures for **Salmonella** were obtained daily for 10 days. After selection of 186 patients completing the treatment protocol, the results indicated that the commercial probiotic formulations had no effect on **Salmonella** shedding, prevalence of diarrhea, length of

antimicrobial therapy, or length of hospitalization (P gt .05). Twenty percent of the horses yielded 1 or more positive fecal cultures for **Salmonella**; of these horses, 74% were classified as asymptomatic shedders. Twenty-six percent of all horses had fluid diarrhea postoperatively, with only 12% of these horses having positive fecal cultures for **Salmonella**. The most common isolate was **Salmonella** krefeld (24 of 39 isolates). Among the different gastrointestinal disorders, horses with feed and sand impactions appeared to be more prone to shed **Salmonella**.

L9 ANSWER 61 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 46

AB A study was conducted to compare the pathogenicity of three **Salmonella** enteritidis phage type 8 strains (9, 21, and 30) in 30-wk-old laying hens. Strain 9 expressed two types of fimbriae of 14 and 21 kDa. Strain 30 expressed a single fimbrial type (21 kDa). Strain 21 did not express any fimbrial protein. Laying hens were divided into three groups of 35 each and each group was orally inoculated with a single S. enteritidis strain (1 times 10-8 cfu per bird). Significantly less intensive cecal colonization and **fecal shedding** of the organism were observed in hens that were inoculated with the strain that did not express fimbriae than in birds inoculated with other two strains (P lt 0.05). Isolation of S. enteritidis from liver, spleen, reproductive organs, and egg contents did not differ between groups. Mean serum S. enteritidis lipopolysaccharide-specific antibody titers of birds inoculated with strain 21 were lower than titers of hens that were inoculated with the other two strains from the 5th wk through the end of the trial. Immunoblot of the bacterial outer membrane structures revealed the presence of serum antibodies against lipopolysaccharide, membrane-associated proteins, and purified 14 kDa fimbrial protein in birds inoculated with strain 9 as late as 9 wk postinoculation. Results of this study are consistent with a role for fimbrial proteins in the cecal colonization by S. enteritidis. In addition, cecal colonization mediated by fimbrial proteins may enhance the elicitation of humoral immune response against S. enteritidis.

L9 ANSWER 62 OF 96 CAPLUS COPYRIGHT 2003 ACS

AB A review with 121 refs. Antimicrobial Growth Promoters (AGPs) are allowed as feed additives, in the European Union. AGPs use increases farms productivity, and poses few toxicol. problems, except microbiol. ones. AGPs modify the animal gut flora, in a way that might be harmful for us. First, AGPs may select antibiotic resistant bacteria in the animal commensal flora (e.g., E. coli, Enterococci sp.). This enlarged resistance reservoir increases the chance (i) of human contamination, (ii) of resistance-plasmids transfer to pathogens, and (iii) of emergence of a new resistant determinant. Second, AGPs may increase the enteric pathogens excretion by animals. An enhanced **shedding** time and/or **fecal** d. of pathogens would increase the risk of human contamination (e.g., **Salmonella**, Campylobacter, Listeria sp.). In the assessment of risks, it is very difficult to distinguish the effects of an AGP from those of other influences operating simultaneously (therapy, contaminations). Risk must be assessed in sequential steps: (1) Preliminary in vitro expts., (2) In vivo basic studies (controlled trials, e.g., gnotobiotic animal models, and exptl. farms), (3) Field epidemiol.: comparison between farms, area and periods with and without the AGP exposure, in retrospective and prospective studies (monitoring). Five documented examples are published, suggesting that AGPs use be hazardous for humans. Recently was shown the selection of vancomycin resistant enterococci by avoparcin. In most cases, however, the antibiotics were not used according to European regulation on AGPs, and the evidence that antibiotic use in animals was the cause of the hazard was lacking or circumstantial. Other published studies suggest that AGPs allowed in Europe are not a threat to consumers, but evidence is also largely

circumstantial. To conclude, genetic resistance to specific AGPs exists, it may be carried on plasmids, and may transfer from animals to humans. Thus, risks are identified. They are not, however, quantified. The hazard of AGPs to humans has not yet (and may never) be proven or disproved. We may, I think, go on using some AGPs in Europe, provided we remain vigilant, by monitoring prospectively resistance in both animals and humans.

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L9 ANSWER 64 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

L9 ANSWER 65 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

L9 ANSWER 66 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 47

AB An avirulent live **Salmonella** choleraesuis culture (SC-54) was evaluated for use as an effective vaccine in preventing salmonellosis caused by S. choleraesuis in pigs. Eighty-two pigs, 3 to 4 weeks old, were randomly assigned to 1 of 2 treatment groups, which were designated as either vaccinates or controls. After vaccination, all pigs were examined for **fecal shedding** of S. choleraesuis, rectal temperature, and 10 clinical variables. Significant difference was not detected between vaccinated and nonvaccinated pigs for 14 days (phase I) after intranasal administration of the vaccine. Efficacy and duration of immunity were examined by intranasally challenge exposing respective pigs from either treatment group with a virulent field isolate of S. choleraesuis at 2, 8, or 20 weeks after vaccination (phases II-IV). Pigs were again evaluated for 14 days after challenge exposure, and 10 clinical variables and rectal temperature were monitored. Surviving pigs were euthanatized and evaluated for gross lesions, and samples of 7 organs were collected. These organ samples were homogenized, and level of S. choleraesuis infection was determined. After virulent challenge exposure during phases II-IV, the clinical status of the SC-54 vaccinates was significantly (P lt 0.05) superior to that of nonvaccinates for rectal temperature, feces consistency, behavior, appetite, body condition, and mean score for the 10 clinical variables. Quantitative bacteriologic culture of the tonsil, lung, liver, spleen, mesenteric lymph nodes, ileum, and colon samples indicated consistent reduction of organ colonization in vaccinates; bacteria numbers in the mesenteric lymph nodes, lungs, and ileum were significantly (P lt 0.05) reduced. Gross lesions in pigs indicated reduction of penumonia in vaccinates. Pigs also had consistent weight gain throughout all phases of the study after challenge exposure, although the differences were not significant. In conclusion, a single intranasally administered dose of SC-54 given to 3- to 4-week-old pigs proved to be safe and efficacious and to provide protection to pigs at least 20 weeks after initial vaccination.

L9 ANSWER 67 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

L9 ANSWER 68 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 48

AB The effects of experimental **Salmonella** infection on chicken lymphoid organs, immune responses, and **fecal shedding** of salmonellae were assessed following oral inoculation of 1-day-old chicks or intra-air-sac infection of 4-week-old chickens with virulent S. typhimurium wild-type chi-3761 or avirulent S. typhimurium DELTA-cya DELTA-crp vaccine strain chi-3985. Some 4-week-old chickens infected intra-air-sac with chi-3761 or chi-3985 were challenged with Bordetella avium to determine the effect of **Salmonella** infection on secondary infection by B. avium. S. typhimurium X3761 caused lymphocyte depletion, atrophy of lymphoid organs, and immunosuppression 2 days after infection in 1-day-old chicks and 4-week-old chickens. The observed

lymphocyte depletion or atrophy of lymphoid organs was transient and dose dependent. Lymphocyte depletion and immunosuppression were associated with prolonged **fecal shedding** of S. typhimurium X3761. No lymphocyte depletion, immunosuppression, or prolonged **Salmonella** shedding was observed in groups of chickens infected orally or intra-air-sac with chi-3985. Infection of chickens with salmonellae before challenge with B. avium did not suppress the specific antibody response to B. avium. However, B. avium isolation was higher in visceral organs of chickens infected with chi-3761 and challenged with B. avium than in chickens infected with B. avium only. Infection of chickens with chi-3985 reduced B. avium colonization. We report a new factor in **Salmonella** pathogenesis and reveal a phenomenon which may play a critical role in the development of **Salmonella** carrier status in chickens. We also showed that 10-8 CFU of chi-3985, which is our established oral vaccination dose for chickens, did not cause immunosuppression or enhance the development of **Salmonella** carrier status in chickens.

L9 ANSWER 69 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 49

AB Four different strains of White Leghorn hens were orally infected with 1 times 10-8 cfu of **Salmonella** enteritidis phage Type 8 per bird. The birds were monitored for 10 wk postinfection for colonization of internal organs, **fecal shedding** of S. enteritidis, and the production of S. enteritidis-contaminated eggs. There was no difference among the four hen strains in regards to the probability of S. enteritidis isolation from liver and spleen, ovary, and cecal tissue within the first 30 d postinfection. However, during the first 14 d postinfection, S. enteritidis organisms were isolated in significantly higher rates from eggs and fecal samples of Strain A than from samples obtained from the other three hen strains. Results suggest that there may be inherent differences between strains of laying hens with regard to their response to infection with S. enteritidis.

L9 ANSWER 70 OF 96 LIFESCI COPYRIGHT 2003 CSA

AB Proposed mechanism by which colonization of invading enteropathogens is prevented, includes production/availability of short-chain, bacteriostatic volatile fatty acids (VFAs) particularly acetic, propionic and butyric acids. To check the influence of the feed additive on **Salmonella** carriage in chicken Na EDTA was investigated. Four groups of 7 days old, 10 broiler chicks each were fed Na EDTA at a dosage level of 5 and 10 gm/50 kg of feed for 7 and 14 days. Fifth group served as control and was fed basal ration. During the feeding trial, birds of all the groups were given **Salmonella** typhimurium in drinking water at a rate of 2000 cfu/ml for 24 hours. Intestines of the birds were monitored for colonization of salmonellae. **Shedding** of **Salmonella** in the **fecal** material was used as an indicator of the effect of Na EDTA supplementation on the colonization of **Salmonella**. The mean log number of **Salmonella** shedding decreased significantly with the addition of Na EDTA in all the treatment groups. The treatment groups showed dose and temporal response. The dosage level of 10 gm/50 kg feed for 7 and 14 days ideally depressed the colonization and consequently shedding of salmonellae.

L9 ANSWER 71 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 50

AB On nine occasions over a 1-year period, cull dairy cattle (n = 1,289) at four saleyards and one abattoir in Washington state were surveyed for salmonellae shedding by bacterial culture of duplicate rectal swabs, 251 single fecal samples and duplicate rectal swabs, and 225 mesenteric lymph node and duplicate rectal swabs. Using parallel selective enrichment and brilliant green media, salmonellae were isolated from six cattle, from rectal swabs only, and consisted of five isolates of **Salmonella**

typhimurium and one of **Salmonella** dublin. In the two rectal swab-positive cattle for which mesenteric nodes were also sampled, 1-g samples of the nodes were negative. The rate of **fecal shedding** of cull dairy cattle marketed in Washington state as detected by this methodology is estimated to be 4.6 per 1,000 head (95% confidence interval of 1.9 to 10.6) and is expected to be no higher than 9.2 per 1,000 head if larger fecal samples were used. Based on antibiograms and plasmid profiles, none of the six isolates matched any of the 280 previously characterized isolates of the same serotypes obtained from human salmonellosis cases 2 years previously by the state health department. Four of the five S. typhimurium isolates matched three of 215 S. typhimurium isolates obtained from bovine submissions to the state's animal disease diagnostic laboratory and by a field animal disease investigation unit. The S. dublin isolate matched 17 of the 165 S. dublin isolates in those submissions. In this state, swab sampling of cull dairy cows at the point of first market concentration does not appear to be an efficient method of detecting salmonellae-infected dairy herds.

L9 ANSWER 72 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 51

AB Two replicate experiments were conducted to test the efficacy of two different **Salmonella** enteritidis oil-emulsion bacterins (an experimentally prepared acetone-killed vaccine and a commercially available vaccine) for protecting laying hens against intestinal colonization following oral exposure to S. enteritidis. Each vaccine was administered twice (4 weeks apart), and all hens were challenged with 10-8 cells of a nalidixic-acid-resistant S. enteritidis strain 2 weeks after the second vaccination. Fecal samples from vaccinated and unvaccinated control hens were cultured at three weekly intervals post-challenge to determine the incidence of intestinal colonization and the numbers of S. enteritidis shed into the environment. Both vaccines significantly reduced the incidence of intestinal colonization (P lt 0.05) and the mean number of S. enteritidis cells shed in the feces (P lt 0.01) at 1 week post-challenge. However, the degree of protection afforded by vaccination was only partial, as more than half of the vaccinated hens still shed substantial numbers of S. enteritidis. If used in conjunction with other flock sanitation and infection-monitoring strategies, vaccination with bacterins could potentially reduce the overall level of environmental contamination and thereby also reduce the horizontal transmission of S. enteritidis within and between laying flocks.

L9 ANSWER 73 OF 96 MEDLINE

AB Data were collected from 39 cattle herds in Northern Bavaria with confirmed outbreaks of salmonellosis and analysed regarding the use of herd-specific **Salmonella** vaccines in control of this infectious disease. The inactivated vaccine was applied intranasally three times at intervals of 1 week (each dose of 5 ml; concentration of antigen about 10(10) organisms/ml, inactivated by heat at 100 degrees C). Efficacy of vaccine was evaluated by comparing bacteriological examination of **fecal shedding** of Salmonellae before and after vaccination. The number of **Salmonella**-positive fecal samples was reduced within one week p. vacc. from 25% to less than 1% of all examined fecal samples. Two thirds (65.7%) of the herds were free of infection within 3 weeks p. vacc. Best results after vaccination were obtained when each animal, including the calves, was vaccinated. Further it could be determined that smaller farms with up to 70 cattle did better than larger farms, where often only a part of the herd was immunized (82.6% and 33.3%).

L9 ANSWER 74 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 52

AB The influence of infective dose on chicken immunogenicity was examined in 1-week-old chickens. Chickens were infected orally with various doses of

chi-3761 or chi-3985. **Fecal shedding**, colonization of the cecum, and induction of **Salmonella**-specific serum immunoglobulin isotypes were analyzed over a 5-week period. The DELTA-cya-DELTA-crp **Salmonella** typhimurium vaccine strain chi-3985 was used to assess the effect of vaccination dose on protection after oval vaccination of chickens at 1 day and 2 weeks of age. Wild-type S. typhimurium strain chi-3761 was used to challenge vaccinated and unvaccinated chickens at 6 weeks of age, and the recovery of **Salmonella** from the cecum was used as a measure of protection. Infection of 1-week-old chickens with chi-3985 was more effective in reducing fecal excretion and cecal colonization than was infection with chi-3761. Double vaccination with 10-8 or 10-7 CFU of chi-3985 at 1 day and 2 weeks of age protected vaccinated chickens against cecal colonization by the challenge strain chi-3761. Immunogenicity of **Salmonella** is dose- and genotype-dependent.

L9 ANSWER 75 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB To estimate herd prevalence of **Salmonella** spp., fecal specimens were obtained for culture from neonatal calves of 47 Ohio dairy herds. Of the 452 calves tested, 10 calves from 7 farms were culture-positive. **Salmonella** serotypes isolated were S. dublin, S. typhimurium S. enteritidis, S. agona, S. mbandaka, and S. montevideo. Bulk tank milk filters from these dairies were also submitted for culture. **Salmonella** sp. was isolated from 1 of the 50 filters, and 2 calves from this herd were found to be shedding **Salmonella** sp. of the same serotype.

L9 ANSWER 76 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB A microbiological survey of 10 mice-infested poultry farms was conducted to determine the role of mice in the epizootiology of S. enteritidis infection. Five of the farms were rated as clean of S. enteritidis and five as contaminated based on culture results of environmental samples for S. enteritidis. Of 2103 environmental samples and 715 mice and rats tested, 5.1% and 16.2%, respectively, were culture-positive for S. enteritidis. On contaminated farms, S. enteritidis was isolated from 24.0% of the mice and 7.5% of the environmental samples, which represented 75.3% of all **Salmonella** isolations from mice but only 18.0% of **Salmonella** isolations from environmental samples on these farms. S. enteritidis was not detected in mice on clean farms. Phage types 13a and 14b were the two most frequently isolated phage types from mice and environmental samples. Although only a single phage type was isolated from single free-standing poultry houses, multiple phage types were isolated from multi-house complexes. A bacterial count from the feces of one mouse yielded 2.3 times 10-5 S. enteritidis bacteria per fecal pellet. S. enteritidis persisted at least for 10 months in an infected mouse population.

L9 ANSWER 77 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

L9 ANSWER 78 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 53
AB The purpose of this study was to evaluate the effectiveness of an aromatic-dependent mutant of **Salmonella** typhimurium as a parenteral vaccine for prevention of **fecal shedding** of **Salmonella** spp. Pigs and chickens were vaccinated IM, with 1 .times. 109 and 1 .times. 108 organisms, respectively, followed by a second identical vaccination 2 weeks later. **Salmonella** organisms were not detected by analysis of fecal or cloacal swab specimens from any animal after vaccination. Deleterious side effects were not noticed after vaccination. Pigs were challenge-inoculated PO with 1 .times. 1012 virulent S typhimurium 1 week after the second vaccination. Chickens were challenge-inoculated PO with 3 .times. 108 organisms of either S enteritidis or the virulent parent strain of S typhimurium 3 weeks after

the second vaccination. Vaccinated pigs shed **Salmonella** spp. significantly less frequently than did nonvaccinated pigs. Vaccinated chickens challenge-inoculated with either S enteritidis or S typhimurium also shed **Salmonella** less frequently than the corresponding nonvaccinated control birds; however, the difference was not significant.

L9 ANSWER 79 OF 96 MEDLINE DUPLICATE 54
AB This article reviews current recommendations of therapy with antidiarrheal compounds and antimicrobial agents for acute infectious diarrhea in children. In most infants and children with acute infectious diarrhea, treatment with antidiarrheal compounds is not indicated. Many of these compounds interfere with identification of enteropathogens in stool specimens, and the antimotility class has an overdose potential. Antimicrobial therapy is given to reduce symptoms and to prevent the spread of infection by decreasing **fecal shedding** of organisms. Although effective therapy is not available for patients with enteric viruses, Cryptosporidium, and Microsporidium, therapy is useful for children with amebiasis, antimicrobial-associated colitis, cholera, giardiasis, various forms of Escherichia coli diarrhea and **Salmonella** disease, isosporiasis, shigellosis, and strongyloidiasis. For several other conditions, antimicrobial therapy is of questionable benefit (infection with Campylobacter jejuni or Yersinia enterocolitica, intestinal salmonellosis and enterohemorrhagic E. coli infection). Compounds such as the fluoroquinolones, which are effective in the treatment of acute infectious diarrhea in adults, are not approved for use in children because of potential side effects. Many bacterial, viral, and parasitic organisms cause acute infectious diarrhea; appropriate antimicrobial therapy requires the accurate, rapid identification of the offending enteropathogen. In children with an underlying illness such as acquired immunodeficiency syndrome, manifestations may be prolonged, severe, and recurrent despite appropriate therapy.

L9 ANSWER 80 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 55
AB A study was designed to identify epidemiologic factors associated with the development and spread of salmonellae in horses in a veterinary teaching hospital, through a case-control study and a longitudinal follow-up prospective study. In the case-control study, 44 horses shedding salmonellae in feces were compared with 99 control horses not shedding salmonellae in feces; regarding breed, sex, age and initial diagnosis, none of the odds ratios for study factors was significant. The factors found to be associated with **fecal shedding** of salmonellae in the prospective study included diarrhea at the time of admission to the hospital, fever while hospitalized, and a change in diet while hospitalized. Horses identified to be shedding salmonellae in feces were not limited to those with clinical signs of salmonellosis; however, spread of salmonellae from a shedder without clinical signs of disease to other hospitalized horses was not identified. The most common serovars of **Salmonella** isolated were oranienburg and newport.

L9 ANSWER 81 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 56
AB Laying hens were inoculated orally, intracloacally (IC), or intravenously (IV) with **Salmonella** enteritidis phage type 8 isolates from a human (E700-87), eggs (Y-8P2), or the ovary of a hen (27A). Oral or IV inoculation of 2 .times. 108 to 4 .times. 108 colony-forming units (CFU) of E700-87 caused depression, anorexia, reduced egg production, diarrhea, and some mortality. Lower doses resulted in milder clinical signs. S. enteritidis was cultured from the shells of a few eggs but not from egg contents. **Fecal shedding** persisted for up to 6 weeks in some birds. Isolate Y-8P2 (106 CFU) also caused anorexia, diarrhea, and a drop in egg production. Hens inoculated orally or IC were less severely

affected than those inoculated IV. **Fecal shedding** was intermittent and lasted up to 18 days. Eggshells from the IC-inoculated birds had the highest rate of contamination, and S. enteritidis was isolated from the albumen of 11 and yolk of three of 726 eggs. Oral inoculation of 106 CFU of isolate 27A resulted in a bacteremic infection with seeding of the liver, spleen, peritoneum, ovule, and oviduct. However, the birds remained clinically normal with normal egg production. S. enteritidis was cultured from the yolk and albumen of a small number of eggs until 11 days postinfection. Antigen prepared from S. enteritidis detected antibody in more sera than did commercially available S. pullorum antigen in agglutination tests.

L9 ANSWER 82 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 57

AB An ELISA has been developed for measurement of milk and serum IgG concentrations directed against **Salmonella** dublin. Four groups of cows were studied: group A-7 experimentally challenge-exposed cows (infected, recovered group); group B-6 normal uninfected randomly selected control cows; group C-7 naturally occurring S. dublin carrier cows; and group D-6 normal uninfected S. dublin negative cows from the same herd as group C. Group-A cow were inoculated orally, or inoculated orally and then IV, but one became a S. dublin carrier. As expected, all 7 group-A cows responded with a marked increase in ELISA titer after oral exposure to virulent S. dublin, starting with a mean serum titer of 17.7% and reaching a peak mean serum titer of 79.3% approximately 76 days after initial exposure. As determined by necropsy and organ culturing of the remaining cows, none of the grou-A cows became carriers. The mean serum ELISA titer for group-B uninfected control cows was 14.1% (SD .+-. 12.8%). The mean milk ELISA titer was = 1.0% (SD .+-. 5.5%). Colostrum and then milk gave false-positive results for up to 2 weeks after onset of lactation. Group-B cows were culture negative for S. dublin in feces and milk during lactation, and when tissues were cultured after euthanasia. Milk and serum samples for ELISA, and milk and fecal samples for culturing were taken from all group-A and -B cows twice a week for 6 months. Statistical correlation ($P < 0.05$) was found between serum and milk ELISA titers. A highly significant ($P < 0.001$) difference in serum ELISA titers was demonstrated between cotrol (group B) and infected cows (group A). Milk and feces from group-C carrier cows were cultured for S. dublin 5 days a week for 11 to 13 months. Six of the 7 cows calved during this period. **Fecal shedding** was sporadic in 7 cows. Milk shedding was frequent in certain quarters of 4 of the cows and was sporadic or absent in other quarters of these cows and it was sporadic in 2 cows, and 1 cow had culture-positive milk only twice. The overall milk-shedding rate was 46% (792 positives/1,733 samples), whereas the overall **fecal-shedding** rate was 4% (65 positives/1,733 samples). Shedding in the 4 weeks after parturition was 28% in milk and 5% in feces. Six group-C cows had strongly positive ELISA titers in serum and milk, whereas 1 cows (the cow that had only 2 positive milk cultures) had relatively low ELISA titers. Group-C cows had a mean serum titer of 85.2% (SD .+-. 19%) and mean milk titer of 70.6% (SD .+-. 35.5%). These results indicate that IgG ELISA may be useful in detection of S. dublin milk shedding (mammary gland infection) carrier cows. Milk shedding in the 4 persistent shedders ranged from 101 to 105 organisms/ml, and was associated with evidence of chronic active mastitis. Group-D cows, culture-negative herd mates of group-C carrier cows, were monitored in a manner identical to that used for group-C cows. All cows remained culture-negative for S. dublin in feces and milk and results of organ culturing were negative for S. dublin after euthanasia. The ELISA titers remained negative, with a mean group-D titer of 8 .+-. 7.7% on serum, and 0.6 .+-. 5.5% on milk. A highly significant difference in serum ($P < 0.0001$) and milk ($P < 0.0001$) ELISA titers was demonstrated between group-C carrier cows and group-D uninfected herd mates.

L9 ANSWER 83 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 58

AB In 1985, 22 pony foals reared in a helminth-free environment were tested daily for oocysts of Cryptosporidium sp by use of fecal flotation. Oocysts were found in all foals. Oocysts were first observed in feces collected from foals 9 to 28 days after birth. The mean period of oocyst shedding was 10 days and ranged from 2 to 18 days in individual foals. Diarrhea was observed in 14 of 22 (64%) foals and began before the period of oocyst **shedding**. **Fecal** samples also were examined for other infective agents. **Salmonella** poona was isolated from 1 foal that did not have diarrhea, and coronavirus particles were observed in the feces of 2 foals with diarrhea. Cryptosporidium sp oocysts also were observed in feces of 2 of 17 Thoroughbred foals, 3 of 14 Quarter Horse foals, and 3 of 26 pony foals reared on pastures with their dams. Samples from pasture-reared foals were collected at irregular intervals. Of the 11 Cryptosporidium-positive fecal samples collected from pastured foals, 2 were from foals with diarrhea. A similar survey was conducted during the 1986 foaling season, using the same procedures. Examination of 300 samples from 58 Quarter Horse, Arabian, and pony foals did not detect oocysts. Daily examination of feces from 10 pony foals reared under helminth-free conditions for 30 days also failed to detect Cryptosporidium oocysts.

L9 ANSWER 84 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 59

AB An avirulent mutant strain of **Salmonella** cholerae-suis was cloned for resistance to streptomycin and nalidixic acid. The mutant strain 33-13 also was used because of its avirulence and immunogenicity in mice. Weaned pigs were vaccinated with live strain 33-13; 5 pigs were vaccinated by conjunctivally adminstered 5.5 .times. 107 organisms (low dose), 5 were conjunctionally adminstered 5.5 .times. 109 organisms (high dose), and 5 pigs were administered 5.5 .times. 109 organisms (high dose) IM. Transient fever and transient **fecal shedding** of the vaccine strain developed in pigs vaccinated IM, but not in 2 groups of pigs vaccinated conjunctivally. After intratracheal administration of virulent strain 38-9, nonvaccinated control pigs (n = 9) developed persistent high fever, anorexia, bacteremia, diarrhea, and **fecal shedding** of strain 38-9, whereas vaccinated pigs remained afebrile and clinically normal. Nonvaccinated and uninfected sentinel pigs (n = 8) were kept in units of 2 pigs with each group of experimental pigs, and remained healthy throughout the experiment. Thirteen vaccinated and 7 nonvaccinated control pigs were killed 42 days after vaccination, and 2 vaccinated, 2 nonvaccinated, and 8 sentinel control pigs were killed 58 days after vaccination. Ten organs were evaluated by quantitative bacteriology on necropsy of all pigs for the presence of vaccine strain 33-13, and for virulent strain 38-9. Strain 33-13 was not found. Lung and liver, lesions were found in most of the nonvaccinated control pigs, with a high frequency of recovery of large numbers of strain 38-9 from the mesenteric lymph nodes, lungs, liver and ileum. Strain 38-9 was rarely isolated from the 10 organs evaluated in the 3 groups of vaccinated pigs. Sentinel pigs in contact with vaccinated and control pigs were uninfected when killed on day 58.

L9 ANSWER 85 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 60

AB Fecal samples from calves on 78 randomly selected Holstein dairy farms in southwestern Ontario were screened for **Salmonella**, Campylobacter jejuni/coli, enteropathogenic Escherichia coli, rotavirus and coronavirus. Based on the observed prevalence, 22% of farms had calves infected with **Salmonella**, 13% with Campylobacter jejuni/coli, 41% with enteropathogenic E. coli, 19% with rotavirus and 5% with coronavirus. These estimates can be modified, using a method developed by Mullen and Prost (1983) for the World Health Organization, to account for the nature of the laboratory test used. It the test is assumed to have no false

positives (that is, if an organism is detected must be there), then the observed prevalence estimates seen on this study may greatly underestimate the true prevalence of infected premises. The use of nipple feeders for calves was associated with an increased probability of farms having calves **shedding** detectable **fecal** levels of **Salmonella**
, E. coli, or one of the two viruses. The use of group pens was associated with an increased odds of finding C. jejuni. Calves with diarrhea on these farms tended to have increased odds of shedding rotavirus, and E. coli with the K99 antigen. However, at the farm level, none of the organisms was associated with above median levels of morbidity. Farms positive for one or other of the viruses had increased odds of experiencing calf mortality relative to virus-negative farms, and farms positive for C. jejuni/coli had decreased odds of mortality. In a separate study utilizing calves form some of the survey farms, scouring calves were observed to be more likely to shed rotavirus and E. coli positive for K99 than appropriately matched nonscouring calves from the same farms. A comparison of an indirect fluorescent antibody test for K99 with a commonly used serological method for screening for enterotoxigenic E. coli found no significant relationship between the results of the two tests.

L9 ANSWER 86 OF 96 CABA COPYRIGHT 2003 CABI

L9 ANSWER 87 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB One-day-old broiler chickens were fed a ration containing enramycin (10 g/t) or avoparcin (10 g/t), or a basal ration without medication for 62 days. All birds were orally inoculated with a nalidixic acid-resistant S. typhimurium F-98 5 days after the start of the medication. On postinoculation days 7, 14, 21, 28, 35, 42, 49, and 56, data were collected on the number of **Salmonella** excreted in the cecal feces, the duration of excretion and the number of birds excreting the organism. There were no appreciable differences in these parameters between birds fed enramycin and unmedicated control birds; the birds given avoparcin were significantly different from those of the other 2 groups: the avoparcin-treated chickens shed more **Salmonella** for a longer period. Evidently, feeding a dietary level of 10 g/t of enramycin to broiler chickens has no effect on either the extent or duration of **fecal shedding** of **Salmonella**. Examination of
the colonization of S. typhimurium in the intestinal tract of the infected birds showed that the **Salmonella** persisted predominantly in the cecum.

L9 ANSWER 88 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AB S. agona, S. anatum and S. oranienburg were isolated from the feces of mice in the course of screening > 4000 fecal samples from rodents in 22 research and production facilities. The rodents were monitored repeatedly over an 8 mo. period in 1979-80. These 3 **Salmonella** isolates
were cultured from mice at 11 of 22 facilities. S. oranienburg was found in 56% (14 of 25) of **Salmonella** positive accessions, S. anatum
in 36% (9 of 25), S. agona in 4% (1 of 25), and both S. oranienburg and S. anatum were isolated in 1 accession. In order to determine the potential pathogenicity of these 3 **Salmonella** spp., groups of DBA/2N mice
were experimentally infected with the 3 agents. Several animals died acutely of apparent septicemia several days post-inoculation. Mice continued to shed the organisms in the feces for up to 5 wk post-inoculation at which time they were necropsied and cultured extensively. Culture of visceral organs revealed mice to have systemic dissemination regardless of the **Salmonella** spp. Evidently, these 3 **Salmonella** spp. were regularly shed in the feces and, although not highly pathogenic, they had the potential to be invasive and cause disease when mice were stressed.

L9 ANSWER 89 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 61

AB An experimental and statistical model was developed to study the effect of antibiotics in feed on the **fecal shedding** of **Salmonella**. The model design consisted of 3 groups of 4-10 experimentally infected ducks each; group 1 was given no medication, group 2 was given a small dose of antibiotic and group 3 was given a large dose of antibiotic as feed supplement for growth promotion. The test for the null hypothesis and Fisher's exact test were used for evaluating the significance of the results on each sampling day and for the experimental totals. Experimental results of the model showed that, whereas oxytetracycline (OTC) significantly ($P < 0.05$) decreased the duration of shedding of OTC-sensitive **Salmonella**, it significantly increased the duration of shedding of OTC-resistant **Salmonella**. Evaluation of zinc bacitracin by this model indicated that zinc bacitracin either produced by a moderate increase in the duration of **fecal shedding** or failed to alter the duration of **fecal shedding** of **Salmonella**. Seemingly, it is necessary to select a sensitive and a resistant **Salmonella** strain to evaluate the effects of antibiotics in feed.

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AB Eggs are a source of salmonellae. Since some hens are exposed to salmonellae, the risk to human health was determined. White Leghorn hens were inoculated with **Salmonella** typhimurium, since this organism is often mentioned as being a common isolate from eggs and egg products. The hens were inoculated orally or i.v. via the basalic vein of the wing. Oral inoculation of S. typhimurium did not result in contamination of the egg shells or contents (yolk and albumen) even though the organisms were eliminated with the feces. Injection i.v. did not lead to **fecal shedding** of salmonellae nor could the organism be isolated from the shell or the egg contents.

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AB Experimentally induced infection of adult horses with **Salmonella** typhimurium following oral challenge exposure was characterized by 4 clinical syndromes: asymptomatic **fecal shedding**, intermittently or constantly, for relatively short periods (4-6 days); fever, depression and anorexia, sometimes accompanied by neutropenia and left shift, without obvious intestinal abnormalities or diarrhea; severe, acute fulminant diarrhea, accompanied by fever, depression, anorexia, degenerative left shift and dehydration; and septicemia, characterized by fever, depression, anorexia, degenerative left shift and death. Septicemia and diarrhea may be present simultaneously or closely follow one another in the same horse. All 4 syndromes occur naturally. Which syndrome occurred seemed related to challenge dosage, previous exposure to the organism and stress factors on the individual horse. Previous exposure by means of oral challenge exposure with 10,000-fold fewer organisms than the challenge dosage resulted in protection from diarrhea, septicemia and death but did not consistently protect against the development of fever, leukopenia or left shift. Small-challenge doses (1.5 .times. 107) resulted in recovery of fecal salmonellae by bacteriologic cultural procedures only from Se-enrichment culture media, whereas large-challenge doses (1.5 .times. 1011) resulted in recovery of fecal salmonellae from primary cultures on brilliant green agar plates. Two of 2 horses with diarrhea and 2 of 2 horses with septicemia had positive primary fecal cultures. Multiple blood cultures taken during febrile periods could possibly be used to identify septicemia. At necropsy, cultural examinations of septicemic animals resulted in all organs cultured yielding salmonellae. Tissues from horse no. 151, which had negative blood cultures and apparently died as a result of dehydration and acid-base and electrolyte abnormalities, yielded salmonellae only from intestinal and colonic lymph nodes. In 1 horse (no. 155) euthanatized after becoming fecal culture-negative, salmonellae were not recovered from any tissues.

Fecal shedding of the organism lasted from 2-19 days after challenge exposure.

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AB Swine were fed a diet containing 110 mg of chlortetracycline (CTC)/kg (100 g/ton) or a control diet and were inoculated orally with S. typhimurium that was susceptible or resistant to CTC. The quantity, duration and prevalence of fecal elimination of S. typhimurium, and the effect of CTC on the transmission of S. typhimurium from infected to uninfected swine, were determined. When animals were infected with CTC-resistant S. typhimurium, CTC increased the quantity ($P < 0.05$), duration ($P < 0.05$) and prevalence ($P < 0.01$) of **fecal shedding**, transmission from infected to uninfected swine and recovery of the infecting organism at necropsy. When animals were infected with CTC-susceptible S. typhimurium, CTC reduced the quantity (7-10 days postinfection) ($P < 0.01$), duration ($P < 0.05$) and prevalence ($P < 0.05$) of **fecal shedding**, transmission from infected to uninfected swine and recovery of the infecting organism at necropsy. Resistance to tetracycline was transferred in vivo to 4 and 6% of the susceptible infecting S. typhimurium recovered from the untreated and treated groups, respectively. The increased reservoir of S. typhimurium and the transfer of resistance to susceptible S. typhimurium have implications for animal and public health.

L9 ANSWER 93 OF 96 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 64

AB Compared with unvaccinated challenged birds, day old chicks vaccinated orally with live S. typhimurium galactose epimerase mutant (G30D) and challenged orally after 14 days with a field strain of S. typhimurium had statistically significant reductions in **fecal shedding** ($P < 0.01$), in **salmonella** carrier status at slaughter ($P < 0.05$), in **salmonella** in the broiler-house environment ($P < 0.005$) and in serological response in the 4th wk after challenge ($P < 0.005$). The vaccine did not elicit a serological response as measured by plate, microagglutination and microantiglobulin tests. The vaccine had a significant depression on live-wt gain which was not apparent after 6 wk. The vaccine did not significantly reduce live wt at 8 wk below that of unvaccinated control birds. The field strain produced an 8% reduction in live wt at 8 wk below that of controls. The potential role of vaccines in **Salmonella** control and economic losses due to salmonellosis are discussed.

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AB Studies were conducted to test the influence of the feeding of chlortetracycline (CTC) on the **fecal shedding** of S. typhimurium subsequent to experimentally induced infection in calves. Levels of 0, 20, 50 and 100 g CTC/ton of feed were fed to groups of calves for a 2 wk period before inoculation and the resulting level of shedding of S. typhimurium quantified. At the 50 g/ton level, the feeding of CTC was associated with a significantly higher level of shedding than in non-CTC fed controls and the duration of shedding was longer. Calves fed at 50 and 100 g CTC/ton were affected much more severely by the inoculation than calves receiving no CTC. The same was true to a lesser estent in the calves fed 20 g/ton. Observations made on each calf included changes in body temperature, time of onset, severity and duration of diarrhea, straining and anorexia. Since the fecal output of salmonellae is increased at the level of 50 g/ton, this commonly used level of CTC feeding in calves contributes to the size of the **Salmonella** reservoir in nature, increasing the risk of exposure to man and animals alike and complicating the problems of salmonellosis.

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AB Fecal samples from watchdogs which were fed collectively, but kept separately, and from isolated animals were examined for **Salmonella** ; 18 serotypes were isolated from 25.2% of 480 samples taken from 109 watchdogs. Only 10.8% of the samples taken from 399 dogs admitted at quarantine station were positive. Fecal samples from domestic dogs were negative. Of 1033 specimens examined between April 1975 and April 1976 171(16.6%) contained **Salmonella**. High percentages of certain serotypes were mainly due to the presence of the same type in fecal samples from several dogs examined on the same day. None of the healthy animals was a carrier over a long period of time. Apparently the dog is an accidental host of enteric **Salmonella** ingested with food. Even temporary shedding of **Salmonella** with the feces is not to be expected when dogs are fed clean food and kept away from wild animals.

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AB Weanling pigs (20) infected with S. typhimurium were fed control and 4.4 mg bambermycins/kg of diet in a 7-wk study to determine the effect on quantity, prevalence, shedding and susceptibility of **Salmonella**. Special precautions were taken to eliminate cross contamination between infected and uninfected animals on both treatments. **Salmonella** counts of the homogenized fecal samples were monitored to study the parameters before and after inoculation. Five colonies from each fecal specimen suspected of being **Salmonella** were isolated, serologically identified and tested for susceptibility to 10 antibiotics. The use of bambermycins supplemented feed reduced the duration and prevalence of **Salmonella** shedding in pigs. Bambermycins fed pigs showed an increased rate of shedding during the first 10 days and except for 2 days, the quantity of **Salmonella** shed was less. Feeding bambermycins diets significantly reduced the number of **Salmonella** resistant to ampicillin, streptomycin, triple sulfa and tetracycline. **Salmonella** was not recovered from liver, spleen or ileocaecal lymph nodes from any of the pigs at terminal necropsy. Three non-medicated pigs showed positive colon **Salmonella** cultures while only 1 of the bambermycins medicated animals showed a positive culture. This indicates that bambermycins did not increase the carrier state of **Salmonella** in pigs.